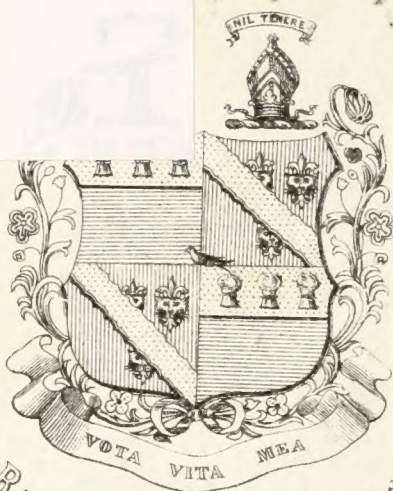


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651 to 700 } wanting.

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451 to 500 }

Hooker (W. J.).

Icones Plantarum

London: 1836-41.

4 vols. 8vo.

New series, Vols. V-X.

(1842-54).

Third series by J. D. Hooker,

Vol. XI. (1867 →).

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TAB. DCI.

FRIESIA RACEMOSA. A. Cunn.

Dioica, foliis cordato-ovatis acuminatis longe petiolatis serratis, racemis compositis axillaribus, ramulis foliisque junioribus pubescenti-hirtis, stigmate 4-lobo.

Friesia racemosa. A. Cunn. in Ann. Nat. Hist. v. 4, p. 24.

Dicera? serrata. *Forst. Prodr. n. 227. De Cand. Prodr. I, p. 520. A. Rich. Fl. Nov. Zel. p. 304.*

Elaeocarpus Dicera. Vahl, Symb. 3, p. 67.


HAB. New Zealand, shady forests, Northern Island. *Sir J. Banks, A. Cunningham, Colenso, Edgerley, Bidwill, Sinclair, Dr. Hooker. Middle Island, G. Forster.*

The diœcious nature of this plant does not seem to be noticed by any author: yet such is the fact. And at the time the accompanying figure was made, I did not possess the female flowers, only the male flowers and fruit. They have, however, since been brought home by Dr. Hooker; and exhibit small, barren stamens, an ovate germen, seated upon an annular disk with four glands, a tapering, deciduous style, and a four-cleft, spreading stigma. In this diœcious character, in the four-cleft stigma and in the paniculated flowers, the plant differs from the original *Friesia* of De Candolle; but it agrees in all other essential particulars. It forms a shrub or small tree, 12-15 feet high, and is called *Mako-mako* by the natives.

Fig. 1. Male flower. f. 2. The same, more expanded. f. 3. Perfect stamen. f. 4. Portion of a fructiferous panicle; nat. size. f. 5. Fruit; a bacca sicca. f. 6. The same, cut open transversely. f. 7. The same, laid open vertically. f. 8. A seed laid open. f. 9. Embryo:—magnified.

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TAB. DCII.

ELÆOCARPUS HINAU. *A. Cunn.*

Foliis alternis petiolatis oblongis basi attenuatis coriaceis superne serratis subtus adpresso-sericeis nervis prominentibus, nervorum in axillis sæpe foveolatis superne bullatis, racemis axillaribus simplicibus, petalis trilobis, antheris apice inæqualiter bilabiatis, ovario biloculari, loculis biovulatis, drupa ovali monopyrena.

Elæocarpus Hinau. *A. Cunn. in Ann. Nat. Hist. v. 4, p. 23.*

Elæocarpus dentatus. *Vahl. Symb. 3, p. 67.*

Dicera dentata. *Forst. Prodr. n. 226, De Cand. Prodr. 1, p. 520. A. Rich. Fl. Nov. Zel. p. 303.*

HAB. New Zealand, Northern Island, *Sir J. Banks, A. Cunningham, Colenso, Edgerly, Dr. Hooker.*—"Hinau" of the natives.

Of the genus *Dicera* of Forster, founded upon the present plant, but to which Forster added doubtfully, the *Dicera? serrata*, the *D. dentata* is by Vahl correctly referred to *Elæocarpus*, and the *D. serrata* by De Candolle to *Friesia* (See TAB. DCI.); so that the only plant now remaining in *Dicera* is the very dubious *Craspedium tectorum*, of Loureiro. Of the plant here figured, Mr. Cunningham has given a very accurate description; but he describes the ovary as 5-celled, which I find to be 2-celled. The solitary fruit I possess is a drupe with one perfect seed. "The wood of the *Hinau* is remarkable for its whiteness; but it is almost useless, on account of the way in which it splits when exposed either to wet or warmth. Its chief use is that it makes an excellent dye, either a light brown, puce, or dark black, not removable by washing. The natives employ the outer skin of the bark for the purpose of dying the black thread of their garments."—*Yates.*

Fig. 1. Flower. *f. 2.* The same, with the petals removed. *f. 3.* Stamen. *f. 4.* Pistil. *f. 5.* Ovary, cut through vertically. *f. 6.* The same, cut through transversely:—*magnified.*



TAB. DCIII.

MELICOPE TERNATA. *Forst.*

Foliis oppositis petiolatis trifoliolatis, foliolis obovatis obtusiusculis integerrimis pellucido-punctatis glabris, paniculis axillaribus trichotomis petiolo longioribus.

Melicope ternata. *Forst. Prodr.* p. 166. *Char. Gen. t.* 28. *De Candolle Prodr.* 1, p. 723. *A. Rich. Fl. Nov. Zel.* p. 293. *A. Cunn. in Ann. Nat. Hist.* 3, p. 315.

Entoganum lævigatum. *Sol. Mst. Gärtn. Fruct.* 1, p. 331, t. 68.

HAB. New Zealand, Northern Island. *Sir J. Banks. A. Cunningham, Colenso.*

Of this likewise, an accurate description is given by Mr. Allan Cunningham in the "Annals" above quoted. I have, therefore, only to remark here, that it is the type of the genus *Melicope*; and whether or not the *M. simplex* A.C. and of us in the Sixth Volume of this Work, TAB. DLXXXV. is of the same genus, remains to be ascertained by an examination of more perfect specimens than we, at present, possess.

Fig. 1. Portion of a leaflet. *f. 2.* Flower. *f. 3.* The same, from which the petals are removed. *f. 4.* Perfect fruits; *nat. size.* *f. 5.* Single fruit. *f. 6.* The same, the seeds escaping from the cell. *f. 7.* Carpel laid open. *f. 8.* Seed laid open:—*magnified.*



TABS. DCV., VI.

SCYTANTHUS CURRORI, Hook.

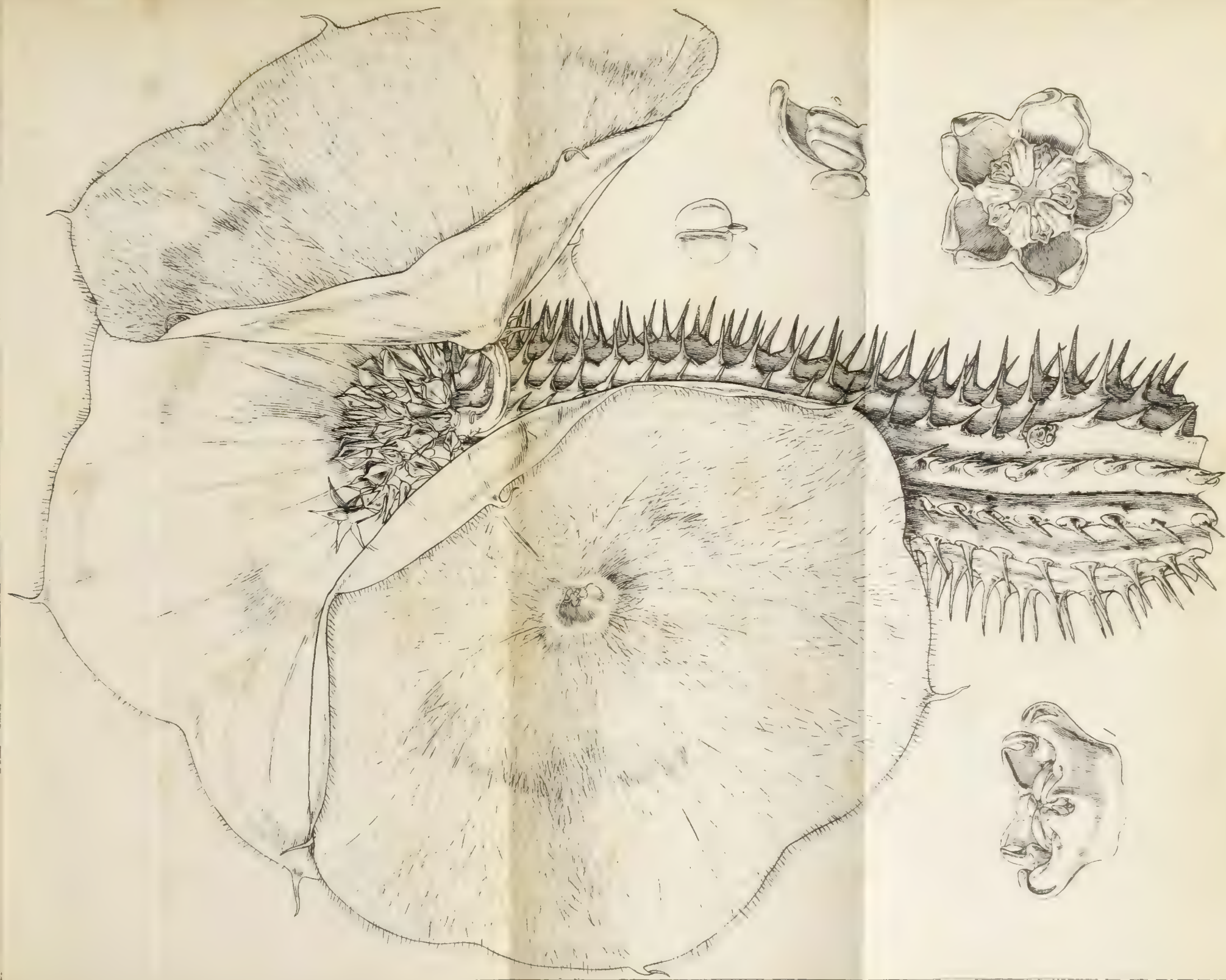
GEN. CHAR. *Scytanthus*, Hook.—*Cal.* 5-partitus. *Corolla* rotata, tubo brevissimo, limbo maximo dilatato concavo membranaceo nervoso obsolete 5-lobo, lobis dente aristiformi terminatis. *Columna fructificationis* inclusa. *Corona staminea* duplex; *exterior* quinquefida, lobis rotundatis erecto-incurvis obtusis bifidis, laciniis denteque in sinu inflexis; *interior* pentaphylla, foliolis e basi gibbosa oblongis obtusis in summitatem columnæ arcte adpressis, laciniis exterioribus alternantibus. *Antheræ* apice simplices, obtusæ. *Pollinia* basi affixa, erecta, ovata, sessilia. *Stigma* muticum. *Folliculi* 2 (immaturi) cylindracei utrinque acuminati, læves.—*Plantæ Africa Australis carnosæ aphyllæ multangulatæ ramosæ, angulis aculeatis, aculeis basi dilatatis; versus apicem floriferæ. Corolla amplissima.*

Scytanthus Currori; corolla ciliata intus tota pilosa.

HAB. Barren, sandy mountains, but sparingly, at Elephant's Bay, West Coast of Africa, lat. 14 deg. S. *Dr. A. B. Curror.* R.N. 1840.

I have already, in the London Journal of Botany, v. 2, p. 166, taken occasion to mention the re-discovery, by Mr. Burke, on the banks of the Orange river, South Africa, of that most remarkable plant, *Stapelia Gordonii*, of Masson's "*Stapeliæ*," Tab. XL; which was only known to Naturalists by the figure there given, and was drawn on the spot by Colonel Gordon, and no specimen was preserved. This will be found represented at our TAB. DCXXV. of the present Volume. Still a correct knowledge of the organs of fructification was a desideratum which could not be gained from dried specimens; and it was with no small degree of pleasure that I received from Dr. Curror, of H.M.S. Water-Witch, a noble flowering specimen of another but nearly allied species, preserved in spirits, with a stem so much resembling that of some *Cactus* (of the *Cercus* group) that without the flowers, it might readily be mistaken for such. It is this plant that is here figured, and it is at once distinguished by the larger size of the stems and of the corolla, and the copious hairy lining of the latter. It attains a height of two feet and upwards in the stem, with a diameter of between two and three inches, the barren stems not unfrequently branched at the top. The whole plant is full of a viscid mucilaginous juice, which tastes like starch. There can be no doubt, I think, of the propriety of this, together with the *S. Gordonii*, Masson, constituting a distinct genus, which I have named, from the large size and general shape of the corolla, σκυτρος, a shield, and ανθος, a flower. The specific name is in compliment to its discoverer, who has collected many interesting plants and animals while on the West Coast of Africa.

Fig. 1. Staminal crown; side view. f. 2. The same, seen from above. f. 3. Segment of the inner crown, with anther and pollen-masses. f. 4. Pollen:—magnified.



TABS. DCVII, DCVIII.

ACIPHYLLA SQUARROSA. *Forst.*

GEN. CHAR. *Aciphylla*, *G. Forst.*—*Calycis* margo 5-dentatus dentibus deciduis vel demum obsoletis. *Petala* quinque, ovata, acuta, unguiculata, apice acumine inflexa. *Fructus* oblongus, sectione transversali subteres. *Mericarpia* dissimilia, hinc jugis 4, illinc jugis tribus, omnibus alte alatis, lateralibus marginantibus. *Valleculæ et commissura* multivittatæ.—Herba elata, robusta, erecta, simplex (?), foliis repetitum digitatodivisis pubescentibus rigidis, laciniis elongatis longissime linearisubulatis pungentibus planis striatis, petiolis dilatatis. Umbellæ copiosæ axillares compositæ in spicam densam foliosam longissimam crassam; foliis floralibus minoribus plerumque quinato-divisis, lacinia media duplo triplove majore validiore, arcte reflexa. Flores polygami.

Aciphylla squarrosa. *Forst. Gen. t.* 38.

Ligusticum Aciphylla. *Spreng. in Schult. Syst. Veget.* 6, p. 554.

De Cand. Prodr. 4, p. 159. *A. Rich. Fl. Nov. Zel.* p. 274.

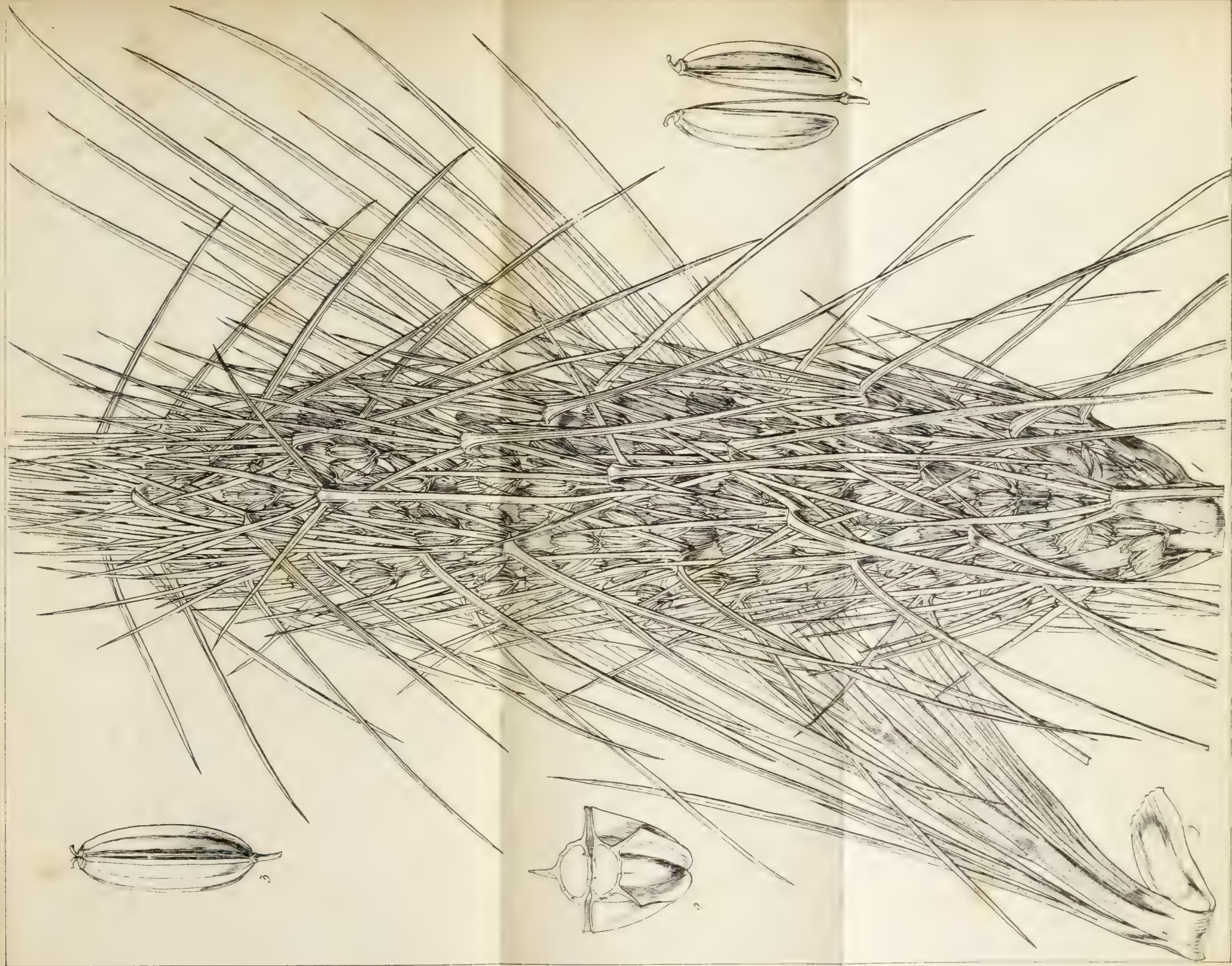
A. Cunn. in Ann. Nat. Hist. 2, p. 212.

Laserpitium Aciphylla. *Linn. Fil. Suppl.* p. 181. *Forst. Prodr.* p. 22.

HAB. New Zealand, Middle Island; Shores of Queen Charlotte's Sound; *G. Forster*. Southern extremity of the Northern Island, in great abundance; and the alpine interior; *Mr. Bidwill*. Roratonga; *Mr. Colenso*.

One of the most remarkable of umbelliferous plants, with a dense flowering spike, often four feet high. Sprengel and De Candolle say of the fruit, "*mericarpia tricostata*." In all the fruits that I have examined, one mericarp has 3 wings, the other four, or in other words, one wing is suppressed on one side of the fruit, 2 on the other; and Forster's character is, "*fructus pentagonus*," which is quite correct; the approximate marginal jugæ forming together two out of the five angles or wings. This circumstance, together with a peculiar habit, has induced me to restore the old genus *Aciphylla*.

Fig. 1. Fructified spike. *f. 2.* Lower leaf; *nat. size.* *f. 3.* Fruit. *f. 4.* The same, separating. *f. 5.* Transverse section of the mericarps:—*magnified.*



TAB. DCIX.

LEPIDIUM ROTUNDUM. *De Cand.*

Glabrum, bienne, caule erecto basi ramoso, foliis lineari-spathulatis obtusis, floribus parvis demum racemosis, sepalis obovatis obtusis petala subæquantibus, siliculis orbicularibus plano-convexis lato-alatis profunde angusto-emarginatis, lobis obtusis, stylo libero sinu brevior.

Lepidium rotundum. *De Cand. Prodr.* 1. p. 205.

Lepia rotunda. *Desv. Journ. Bot.* 3, p. 166 and 181.

HAB. King George's Sound, (*Herb. Mus. Par.*) Swan River, Australia, *Mr. Drummond*, n. 4.

Radix biennis, subfusiformis, flexuosa, superne in ramis plurimis, erectis, simplicibus, vel ad basin, divisa. *Folia* alterna, lineari-spathulata, integerrima, uninervia, glabra. *Flores* corymbosi, demum, planta fructifera, in racemis elongatis extensi, parvi. *Pedicelli* breves, demum 'elongati, superne incrassati. *Sepala* obovata, obtusa, glaberrima. *Petala* spathulata vix calyce longiora. *Stamina* 6, didynama, corollam æquantia. *Ovarium* obcordatum staminibus brevius. *Siliculæ* orbiculares plano-convexæ (hinc planæ v. subconcavæ inde convexæ) latissime alatæ, apice usque ad loculos anguste profunde emarginatæ. *Stylus* liberus sinu brevior. *Semen* quovis loculo unicum, pendulum, obovatum. *Cotyledones* ovatæ, incumbentes.

This is quite different from the *Lepidium Novæ Hollandiæ*, *Desv.* which is allied to *L. Piscidium*.

Fig. 1. Flower. *f. 2.* Petal. *f. 3.* Stamens and pistil. *f. 4.* Silicula. *f. 5.* The same with the valves separated. *f. 6.* Transverse section of the silicula. *f. 7.* Seed. *f. 8.* Embryo : —magnified.



TAB. DCX.

STENOPETALUM ? PROCUMBENS. Hook.

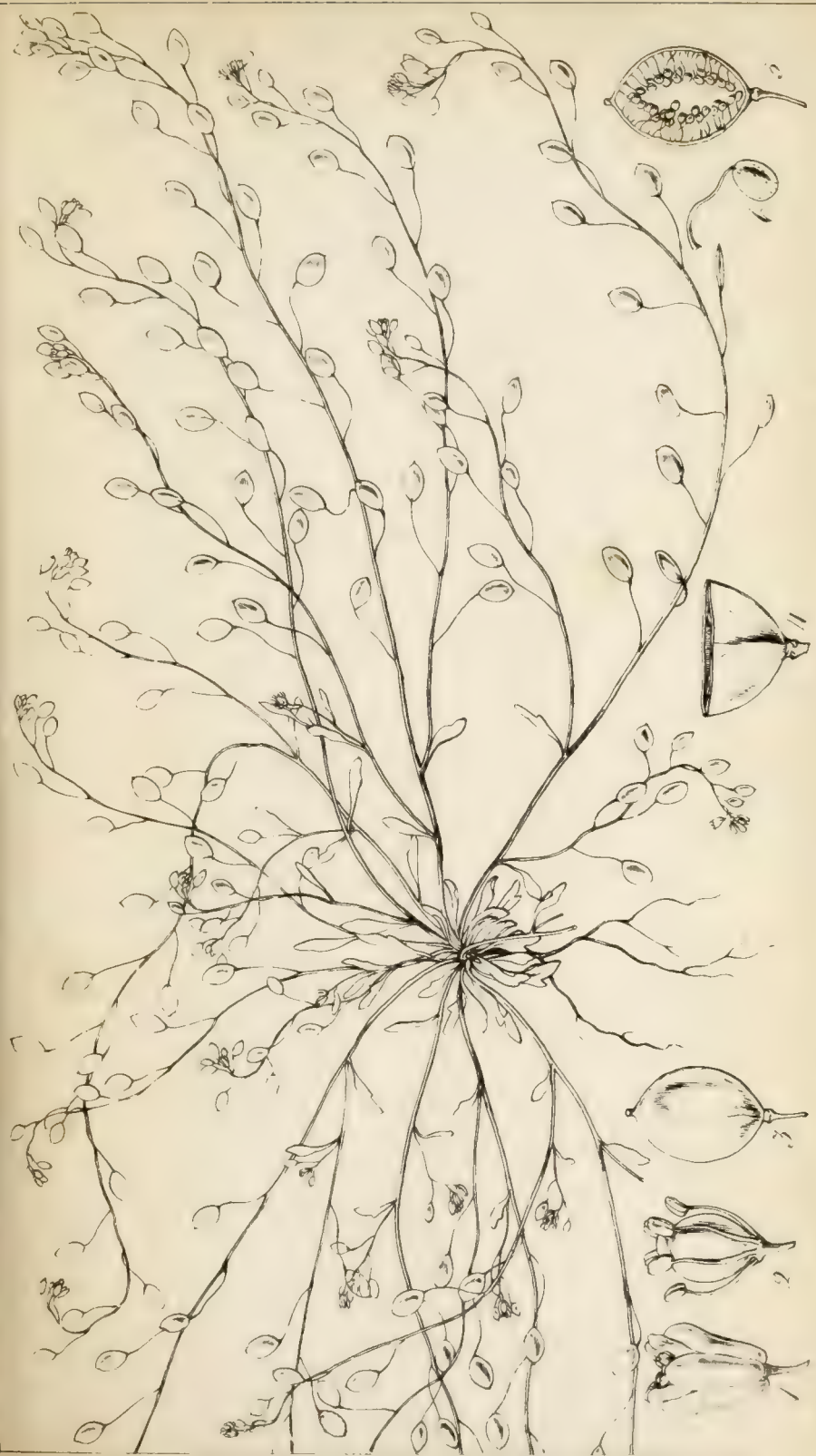
Annuum, caulibus procumbentibus ramosis filiformibus, foliis sparsis lineari-spathulatis radicalibus rosulatis incis, floribus minutis, racemis demum valde elongatis, petalis linearibus obtusis subunguiculatis vix calycem superantibus, siliculis orbiculari-ellipticis compresso-planis stigmatate sessili terminatis, dissepimento nullo, seminibus numerosis, podospermis longissimis.

HAB. Swan River, Australia. *Jas. Drummond*, (*Crucif. n. 3.*)

Radix parva, annua, fibrosa. *Caules* plurimi, filiformes, ramosi, procumbentes, spithamæi et ultra. *Folia* glabra, lineari-spathulata; *radicalia* inciso-dentata; *caulina* integerrima, remota. *Pedicelli* brevissimi, demum (fructiferi) elongati, gracillimi. *Calycis sepala* oblongo-obovata, obtusa, petalis angustis breviora. *Stamina* 6, didynama. *Ovarium* orbiculare, planum, stigmatate capitato sessili terminatum. *Silicula* orbiculari-elliptica, compressa, glabra. *Dissepimentum* omnino nullum. *Semina* (vix matura) parva. *Podosperma* longissima, filiformia.

Notwithstanding the absence of dissepiment to the fruit, I am unwilling to separate this plant from *Stenopetalum*, Br., with which it sufficiently accords in other respects. In the old fruit, the filiform receptacle readily separates from the valves, as shown at fig. 5; and, in a more advanced stage, the seeds, with their stalks, fall away, leaving only the slender thread-shaped ring, tipped with the minute stigma.

Fig. 1. Flower. *f. 2.* Stamens and pistil. *f. 3.* Silicula. *f. 4.* Transverse section of ditto. *f. 5.* The same, from which the valves have separated. *f. 6.* Seed and seedstalk:—*magnified.*



TAB. DCXI.

EUCALYPTUS SPATHULATA. Hook.

Operculo cylindraceo obtuso ovario turbinato triplo longiore, foliis lineari-spathulatis acutiusculis minute punctatis, pedunculis brevibus latis compressis 3-5-floris, floribus brevi-pedicellatis.

HAB. Swan River. *Jas. Drummond*, (*Suppl. Coll. n. 20*).

Frutex ubique glaber. *Rami* teretes fusci, ramulis angulatis. *Folia* opposita, bi-triuncialia, lineari-lanceolata, obtusa, basi attenuata, viridia, obscure uninervia, utrinque sub lente punctulata. *Pedunculi* solitarii, axillares, semiunciam longi, dilatati, compressi, apice umbellatim 3-5-flori. *Flores* brevi-pedicellati, pedicellis incrassatis sensim in ovarium turbinatum truncatum intense fuscum dilatatis. *Operculum* (siccitate) pallide fuscum, cylindraceum, obtusum, ovario triplo longius. *Stamina* numerosa, primum erecta, demum patentia. *Filamenta* sub-incrassata, fulva. *Antheræ* parvæ. *Stylus* rectus, staminum longitudine. *Stigma* simplex.

A species of *Eucalyptus*, not distributed, I believe, in the valuable sets lately sent to his subscribers from the Swan River settlement by Mr. Drummond, but forming part of a supplementary set transmitted to the Author. It is very different from any species with which I am acquainted, or can anywhere find described.

Fig. 1. Flower, still partially covered by its operculum. *f. 2.* Ovary and style:—*magnified.*



TAB. DCXII.

Oxylobium batillum Hook.

Foliis oppositis elliptico-cuneatis apice truncato-retusis coriaceis, supra glabriusculis impresso-punctatis, subtus arcte reticulatis mucronatis ramulisque dense pubescentibus, legumine ovato-acuminato hirsuto dispermo.

HAB. Swan River settlement. *Jas. Drummond*, (*Suppl. Coll.* n. 32.)

I possess no flowers of this species ; but there can be little doubt of the genus to which it belongs. The leaves are coriaceous, cuneate but rounded at the base, truncate or retuse at the apex, mucronate, the angles rather obtuse, the margins a little recurved ; the upper side glossy and slightly pubescent, rough with numerous depressions, paler beneath, there closely reticulated, and, as well as the young branches, downy with short dense hairs. Legumes small, chestnut-brown, slightly hairy, 2-seeded. I have named the species *Batillum* from the resemblance of the leaves to a fire-shovel.

Fig. 1. 2. Legume :—magnified.



TAB. DCXIII.

RHODOPLEXIA PREISSII. Harv.

GEN. CHAR. *Frons* spongiformis, rubra, e filis articulatis, reticulatim connexis, versus superficiem liberis constituta. *Sphærosporæ* sphæricæ, apicibus liberis florum insidentes, pedicellatæ perisporio hyalino. Harv.

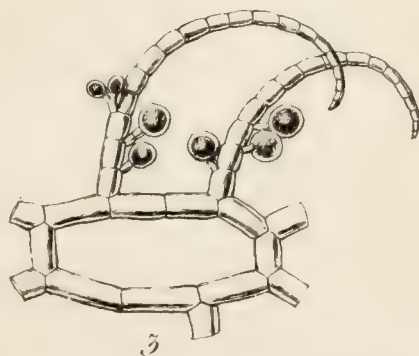
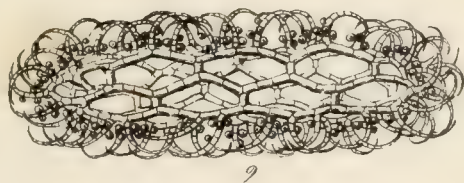
Rhodoplexia Preissii. Harv. MSS.

HAB. In the Sea. Swan River colony, New Holland. Mr. Preiss.

Frons compressa, 2-4 uncias longa, 4-6 lineas lata, $\frac{1}{2}$ lineæ crassa, spongiosa, mollis, nec gelatinosa, irregulariter laciniato-ramosa, ramis plus minus dichotome divisis, axillis rotundatis, tota filis articulatis constituta. *Fila interna* in reticulo denso conjuncta, in modo subflabelliformi longitudinaliter disposita; *externa* v. *superficiaria* incurva, simplicia v. parum ramosa, lineam longa, e reticulo passim exeuntia et idem vestientia. *Color* fusco-ruber. *Sphærosporæ* omnino *Callithamnii*.

A highly remarkable plant, forming another genus of retiform Algæ, allied to *Dictyurus*, *Hemitrema* and *Claudea*, especially to the first; but here there is no stem, the whole plant being composed of a sponge-like network. W. H. H.

Fig. 1. Plant: *natural size*. *f. 2.* Transverse section of a narrow part of the frond. *f. 3.* Small fragment, *highly magnified*, to show the capsules, or *sphærosporæ*.



TAB. DCXIV.

SPHACELARIA HORDEACEA. *Harv.*

Fronde tenui-elongata stuposa, ramis alternis crebris apice fasciculatis subbipinnatis, pinnis pinnulisque spinæformibus; capsularum spicis oblongis aristatis (hordeiformibus) terminalibus.

HAB. Bay of Islands, New Zealand. *Dr. Sinclair.*

A very curious species of *Sphacelaria*, allied to *S. scoparia*, but abundantly distinguished by the spikes of fructification which terminate the branches and ramuli, and under the microscope strongly resemble ears of barley or rye. These are composed of thickly set, quadrifarious, setiform ramuli, each with a cluster of 4-5 elliptical capsules at its base. W. H. H.

Fig. 1. Branch. *f. 2.* Spike of capsules. *f. 3.* Ramulus of the spike, with capsules at its base :—*magnified.*



TAB. DCXV, DCXVI.

HARTIGHSEA SPECTABILIS. *Adr. Juss.*

Foliis pinnatis, foliolis 3-4-jugis cum impari petiolulatis obovatis integerrimis glabris, subtus discoloribus, racemis compositis paniculatis e ramis vetustioribus pendulis, floribus 5-floris, ovario (fructuque) triloculari, capsula pyriformi-globosa.

Hartighsea spectabilis. Ad. Juss. Mém. Mus. v. 19. p. 228.

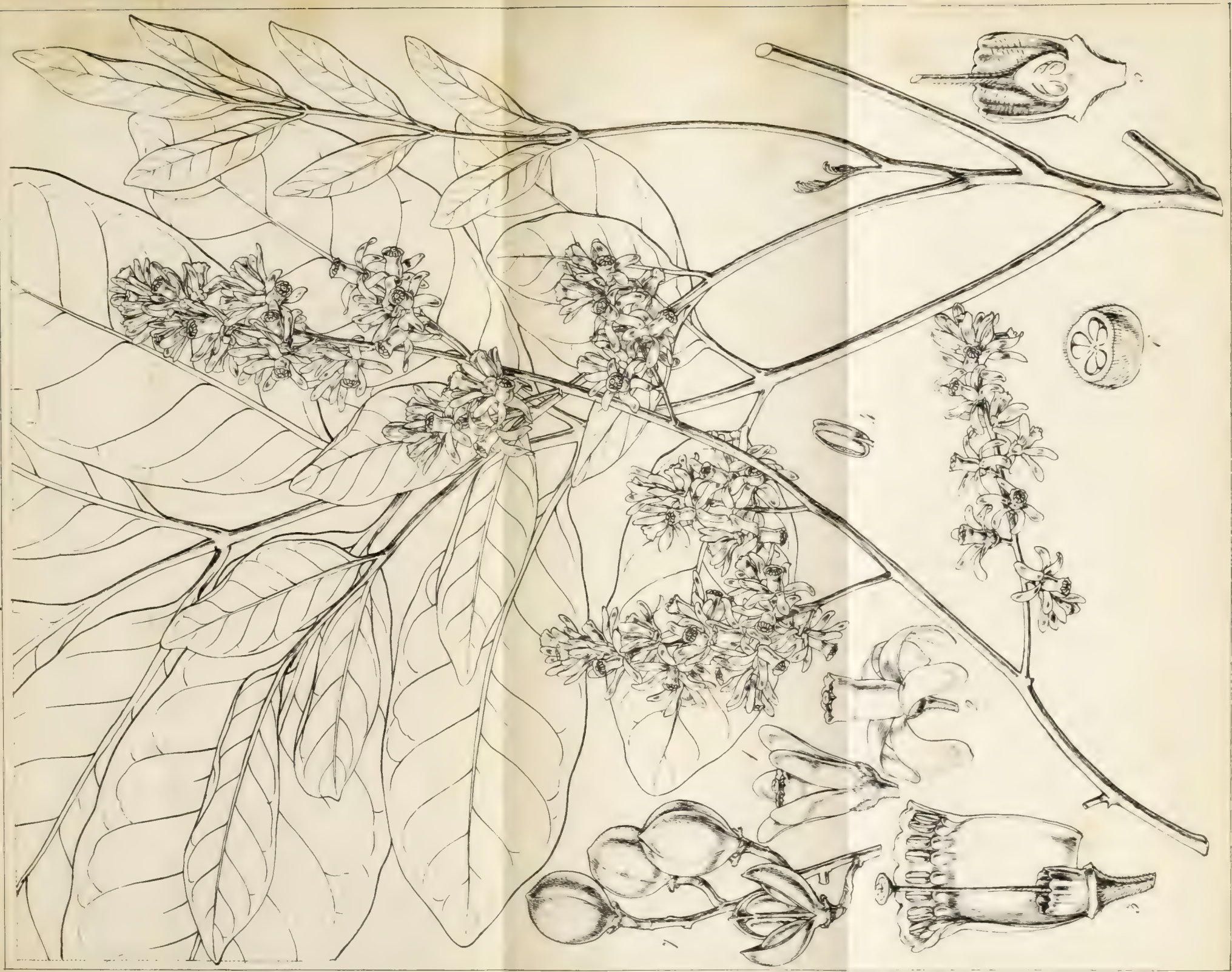
Trichilia spectabilis. Forst. Prodr. p. 33. De Cand. Prodr.

1. p. 623. *A. Rich. Fl. Nov. Zel. p. 306. All. Cunn. in Ann. Nat. Hist. 3. p. 318.*

HAB. New Zealand, Bay of Islands. A. Cunningham. Bidwill. Colenso. J. D. Hooker. Wahahé. Dr. Sinclair.

A tree, according to Allan Cunningham, 30 to 40 feet high, with large pinnated leaves, the leaflets often unequal at the base, petiolulated, especially the terminal one. Panicle, or compound raceme, large, springing from the older portion of the stem or branch. Calyx of 5 rounded lobes. Corolla of 5 petals, connate at the base. Staminal tube nearly as long as the petals, the mouth a little spreading, 10-crenate. Within the mouth are 10 sessile anthers, each with a gland or swelling at the base, and a short crenate cylindrical cup surrounds the ovary, which latter is conical, hairy, tapering into a filiform style, a little longer than the staminal tube. Stigma much dilated and flat at the top. Fruit a rather large, coriaceous, 3-valved, 3-celled capsule, each cell containing 2 seeds enveloped in an arillus. Mr. Bidwill informs me that the leaves of this tree are used instead of hops, and a spirituous infusion of them is a stomachic.

Fig. 1. Flower. f. 2. The same, the corolla spread. f. 3. Staminal tube laid open, to show the inner cup surrounding the ovary. f. 4. Anther. f. 5. Ovary and surrounding cup, laid open vertically. f. 6. Transverse section of the ovary: magnified. f. 7. Fruit:—natural size.



TAB. DCXVII.

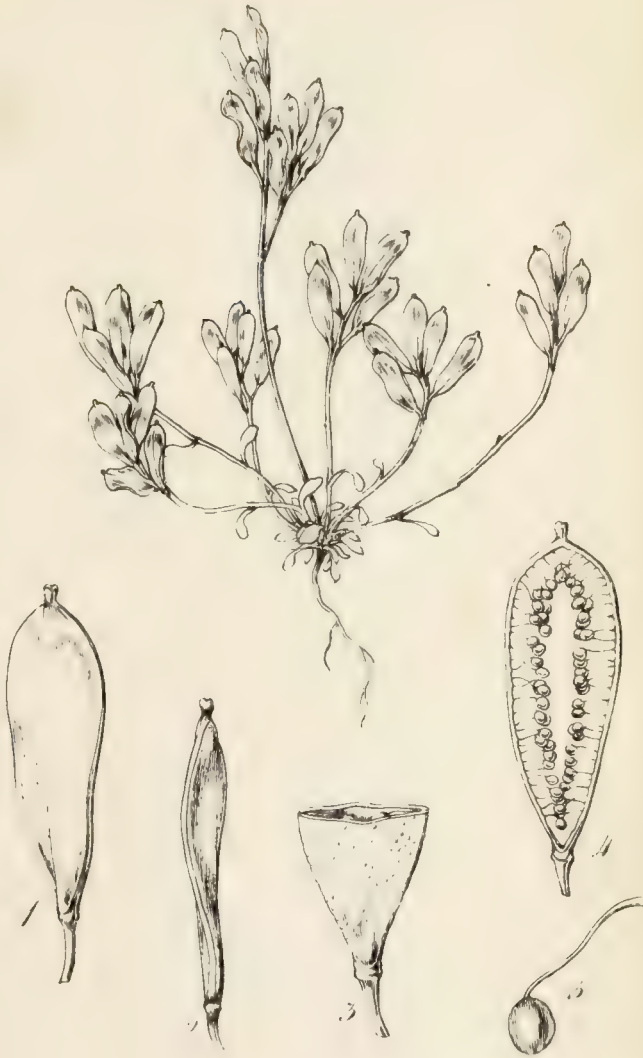
STENOPETALUM DRABOIDES. *Hook.*

Annum parvum pluricaule, caulibus erectis simplicibus parce foliosis, foliis lineari-spathulatis patentibus glabris integerrimis, racemo 4-5-floro, siliculis oblongo-obovatis compresso-planis subtortuosis unilocularibus (dissepimento nullo) minutissime puberuli-granulatis dorso basi obsolete uninervi stylo brevissimo terminatis, seminibus numerosis, podospermis longissimis.

HAB. Swan River settlement, Australia. *James Drummond*, (*Crucif. n. 3.*)

A small annual plant, (the flowers of which are unknown to me,) with quite the habit of *Draba* (or *Eriophila*) *verna*; but the leaves and stems are everywhere glabrous. Nor is the fruit in external appearance very dissimilar; larger, indeed, and longer, more coriaceous, becoming sensibly broader above, and slightly twisted; but within its structure is widely different, the membranous dissepiment, so common to the *Cruciferae* in general, being here wholly wanting, and the numerous seeds being attached to exceedingly long podosperms. In these latter particulars the fruit exactly resembles that of our *Stenopetalum procumbens*, (TAB. DCX. of the present volume), from which, again, the size of the plant, stouter stem and shape of the fruit, will at once distinguish it.

Fig. 1. Siliculæ. *f. 2.* Side view of the same. *f. 3.* Transverse section of the same. *f. 4.* The same, with the valve removed. *f. 5.* Seed and seedstalk:—*magnified.*



TAB. DCXVIII.

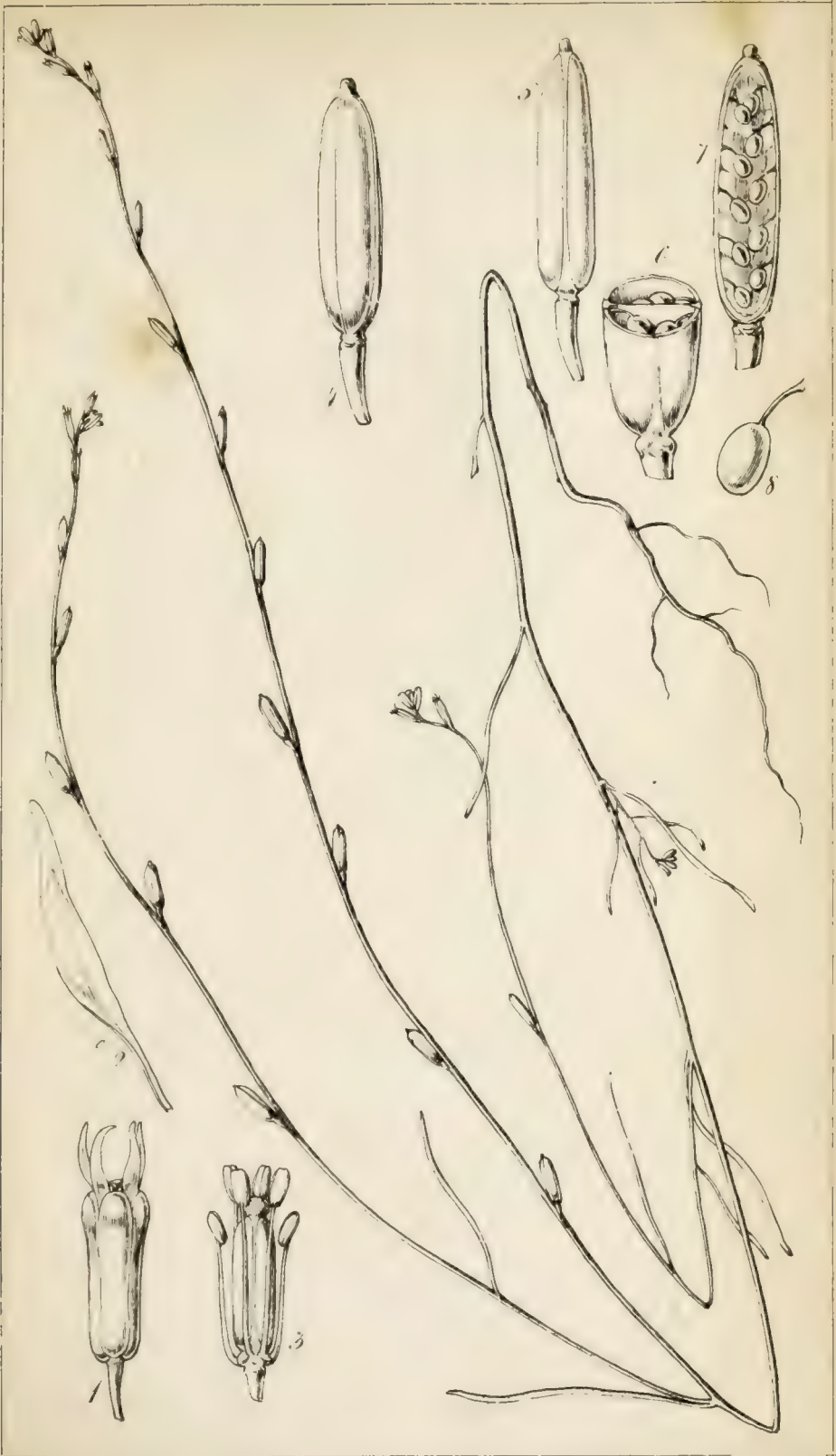
STENOPETALUM LINEARE. Br.

Annuum glaberrimum erectum parce ramosum, caule solitario, foliis remotis elongatis linearibus integerrimis, racemis fructiferis longissimis, sepalis lato-linearibus obtusis, petalis calyce longioribus lineari-oblongis et attenuatis longe unguiculatis, siliculis valde remotis brevissime pedicellatis erectis oblongis tereti-compressis bilocularibus valvis medio uninervibus, stylo brevissimo, podospermis vix semine longioribus.

HAB. Southern coast of New Holland. *R. Brown, Esq.* Swan River settlement. *James Drummond, (Crucif. n. 1.)*

I have reason to believe that this is the original *Stenopetalum lineare* of Mr. Brown, the species on which the genus was founded; but the fruit is certainly more elongated and more cylindrical than in those species of *Stenopetalum* already figured in this work, and somewhat at variance with the generic character as given by De Candolle; "*silicula ellipsoidea, compressa*. Yet, in other respects, in the erect fruit, in the size of the plant, and in the leaves, it tallies with the description; only it is said of the stem "*seta porcina vix crassior*." Our fruit can scarcely be compared with that of *Draba*, to which De Candolle likens it.

Fig. 1. Flower. *f. 2.* Petal. *f. 3.* Stamens and pistil. *f. 4, 5.* Siliculæ. *f. 6.* Transverse section of the same. *f. 7.* Silicula with the valve removed. *f. 8.* Seed and seed-stalk:—*magnified.*



TAB. DCXIX.

EUCALYPTUS MACULATA. *Hook.*

Arbor excelsa, trunco maculato, foliis alternis petiolatis lanceolatis longe acuminatis pellucido-punctatis purpureo-marginatis, nervis copiosis distinctis oblique patentibus, paniculis axillaribus terminalibusque parce ramosis folio brevioribus, operculo duplici, ext. conico-hemisphærico mucronato cupula subangulata brevior, int. (corolla) hemisphærico membranaceo nitido.

Eucalyptus sp. Spotted Gum. *Backh. mst. n. 37.*

HAB. Interior of N. Holland. *Fraser.* Maitland, Liverpool and Newcastle. *Backhouse.*

A large tree, Mr. Backhouse observes, of which the bark falls off in patches, giving it a spotted appearance. The timber is nearly equal to oak, but the sap or outer layers decay rapidly. The lid or operculum is double, inner one membranaceous; this inner one has justly been considered by Mr. Brown as the corolla, and it here forms an exactly hemispherical glossy membranaceous cup, which often continues to adhere after the outer one has fallen away. "The gum from the tree contains benzoic acid." *Backhouse.*

Fig. 1. Cupula and style:—*magnified.*



TAB. DCXX.

STENOPETALUM ROBUSTUM. *Endl.*

Erectum virgatum superne ramosum parce foliosum, foliis inferioribus interrupte lyrato-pinnatifidis laciniis linearibus subobtusis, superioribus elongatis linearibus integerrimis v. remote inæqualiter dentatis, petalis unguiculatis e lata basi longissime subulatis flexuosis acuminatis, siliculis obovatis nutantibus pedicello longioribus.

S. robustum. *Endlicher in Hügel pl. Nov. Holl. p. 4.*

HAB. S. W. Australia, Freemantle (*Hügel*). *Drummond*, (n. 5 and 7.) King George's Sound, (*Mus. Paris.*)

A slender, twiggy, annual plant, 1-2 feet high. Stems terete, naked or sparingly leafy below, branching upwards, the branches erect. Leaves generally withering before the seeds ripen, rather fleshy, 1-1½ inch long, the lower ones more or less divided, bright green and shining, the upper more or less toothed or quite entire. Flowers at first erect, then drooping, on pedicels which are shorter than the calyx. Sepals linear-elliptical, rounded at the apex, pale coloured and tipped with green. Petals orange yellow, their apices paler, or sometimes quite white, the claw very narrow at the base, expanding, and then produced into a slender lamina 4-5 lines long. Shorter stamens seated on 2 broad glands, having 2 other erect glands pressed close to the germen, one on each side of them. Germen elongated, elliptical, with a broad, sessile stigma. Siliculæ obovate, nearly as broad as they are long, 3-5 lines long; stigma very short, valves plano-convex, seeds about 4, with short funiculi.

We have the advantage of figuring this from living specimens which flowered at the Royal Botanical Gardens of Kew, in June 1843, and were raised from seeds sent by Mr. Drummond.

Fig. 1. Flower. *f. 2.* Petal. *f. 3.* Stamens and pistil. *f. 4.* Pistil. *f. 5.* Silicula: *natural size.* *f. 6.* Silicula. *f. 7.* The same, the valves separating. *f. 8.* The same, the valves removed. *f. 9.* Seed:—*magnified.*



TAB. DCXXI.

PITTOSPORUM RHOMBIFOLIUM. *A. Cunn.*

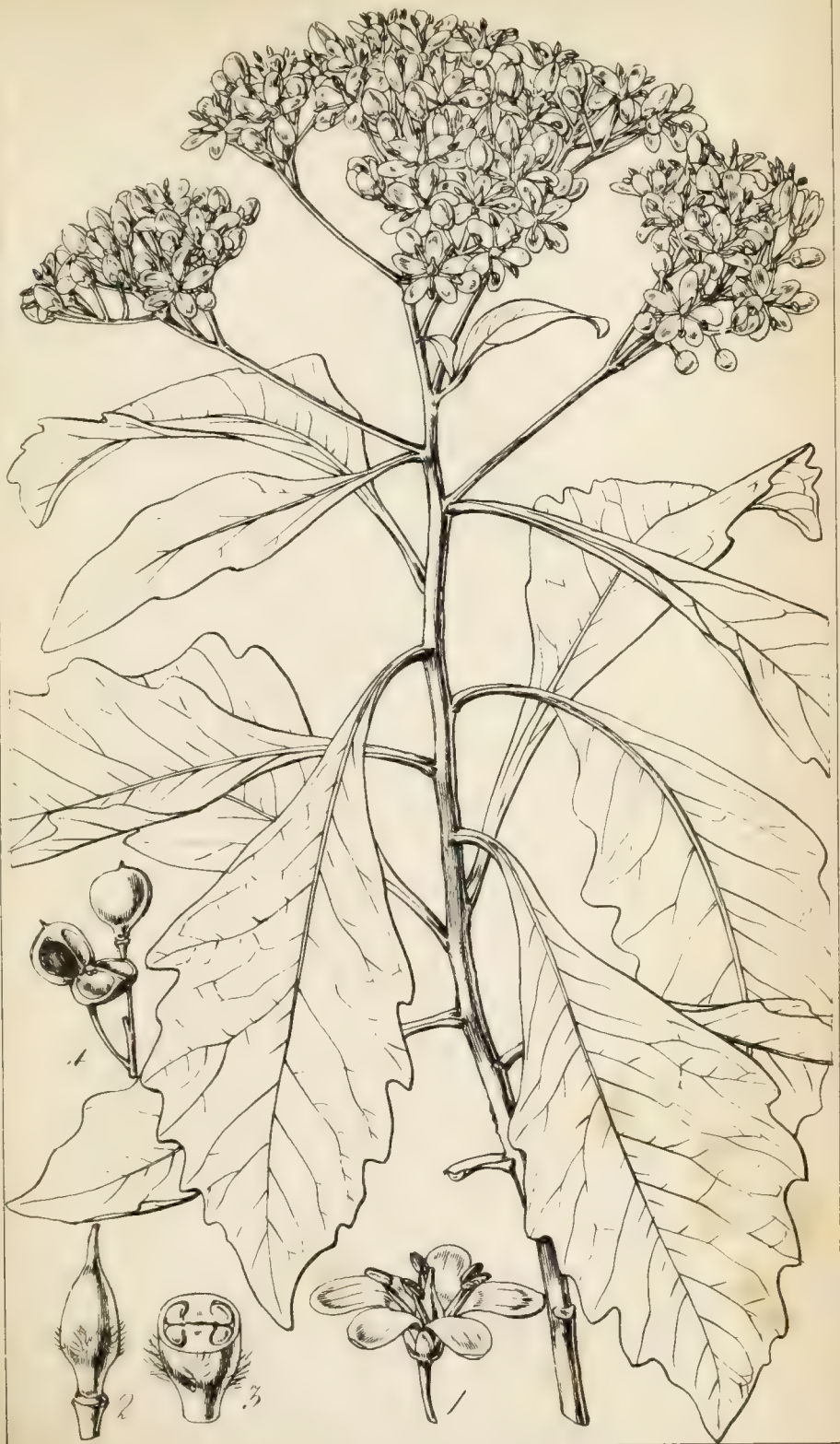
Arbor, foliis coriaceis rhombeo-ovatis basi cuneatis in petiolum attenuatis grosse sinuato-serratis, floribus corymbosis, petalis ellipticis patentibus, ovario basi piloso in stipitem attenuato.

Pittosporum rhombifolium. A. Cunn. MSS. in Herb. nostr.

HAB. Forests of the Brisbane River, *Allan Cunningham.*

This, according to Mr. Cunningham, to whom we are indebted for a knowledge of the plant, as well as the possession of it in the Royal Botanical Gardens of Kew, attains a height of 60-80 feet. In our greenhouse, cramped in a garden pot, it becomes a flowery shrub, in the course of many years only reaching a height of 4 or 5 feet. The flowers are white, arranged in corymbs, axillary and terminal, at first sight not much unlike those of a *Cornus*. The germen, or ovary, has tufts of hairs in the broadest part; below that, it gradually tapers into a short stipes, apparent also in the fruit, which is globoso-compressed, 2-celled and bursting open into 2 valves. The species is remarkable for the coarse tothing of its leaves, and the small and densely corymbose flowers.

Fig. 1. Flower. f. 2. Pistil. f. 3. Section of the ovary:—magnified. f. 4. Fruits:—natural size.



TAB. DCXXII.

HEMITELIA? ALTERNANS. *Hook.*

Inermis, frondibus pinnatis v. bipinnatis, pinnis remotis petiolatis alternis oblongo-lanceolatis coriaceo-membranaceis acuminatis profunde pinnatifidis segmentis oblongis subacutis vix serrulatis, venis liberis basi furcatis, soris in venulas supra furcaturas (rarius axillaribus) seriatim dispositis inter marginem et costam, involucreo peltato tenui-membranaceo sub-integro.

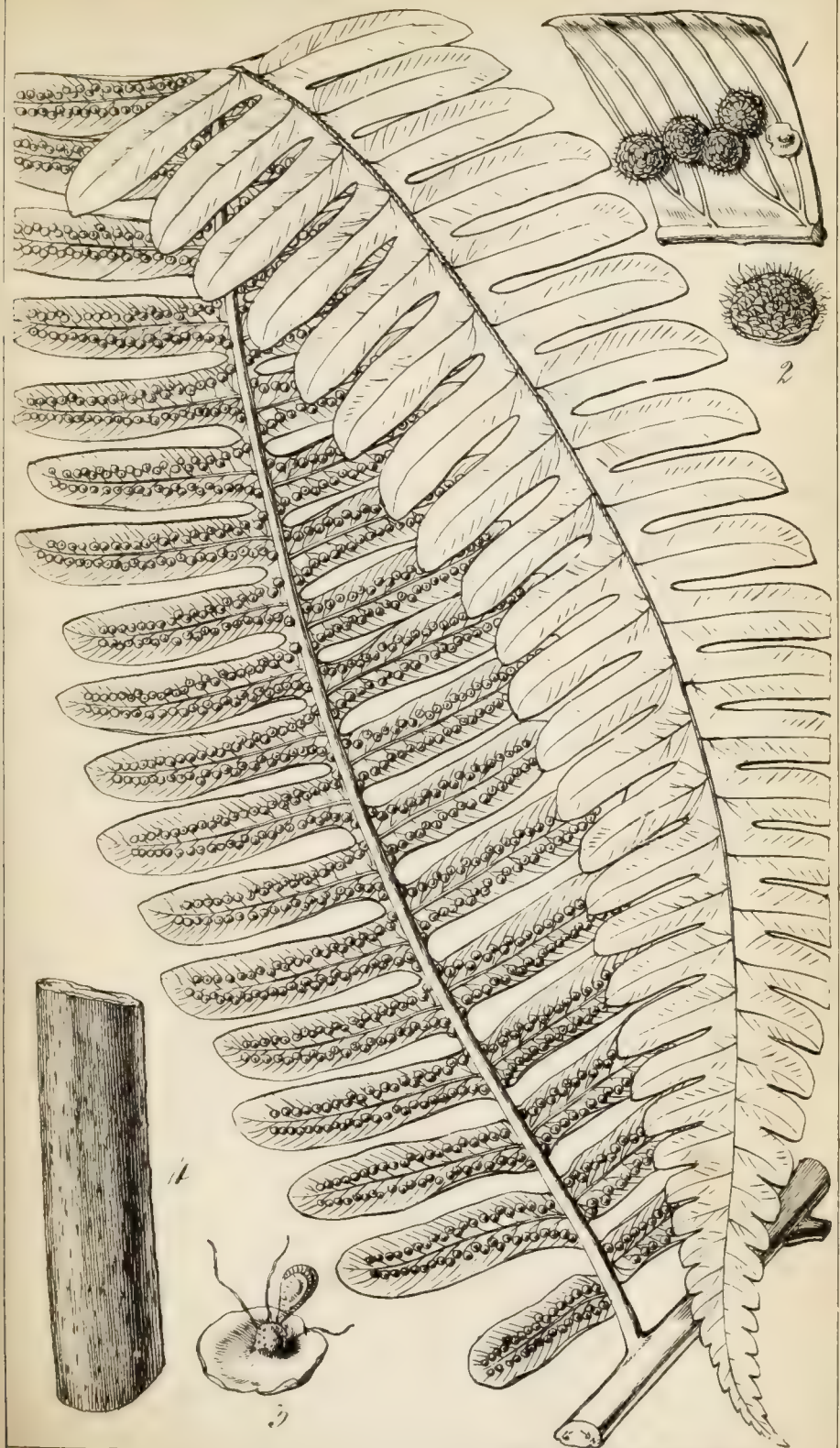
Hemitelia? alternans. Hook. Sp. Fil. p. 29.

Polypodium alternans. Wall. Cat. n. 329.

HAB. Penang. *Dr. Wallich. Lady Dalhousie.*

The Ferns, composing the family or group of *Cyatheaceæ*, present so many forms of fructification, as regards the involucre, that it seems hardly possible to limit the generic distinctions. The present does not possess the deep cup of *Cyathea*, nor the lateral and dimidiate one of *Hemitelia*. As a species, it is a very fine and distinct one, discovered by Dr. Wallich in Penang, and subsequently by Lady Dalhousie in the same island. The pinnæ are very large, deeply pinnatifid, and exhibiting fructifications in a line or series between the margin and costa of the segments. The receptacles produce copious hairs among the capsules.

Fig. 1. Portion of a segment of the pinna with sori, showing the veining. *f. 2.* Sorus, covering the involucre. *f. 3.* Involucre, most of the capsules and hairs being removed from the sorus: *magnified.*—*f. 4.* Portion of the stipes: *natural size.*



TAB. DCXXIII.

CYATHEA BEYRICHIANA. *Presl.*

Stipite aculeato, fronde bipinnata, rachide et costa subpubescentibus, pinnulis lanceolatis acuminatis ad rachin pinnatifidis, segmentis lineari-oblongis acutis obscure serratis subfalcatis, soris copiosis, involucri demum hemisphærico amplo.

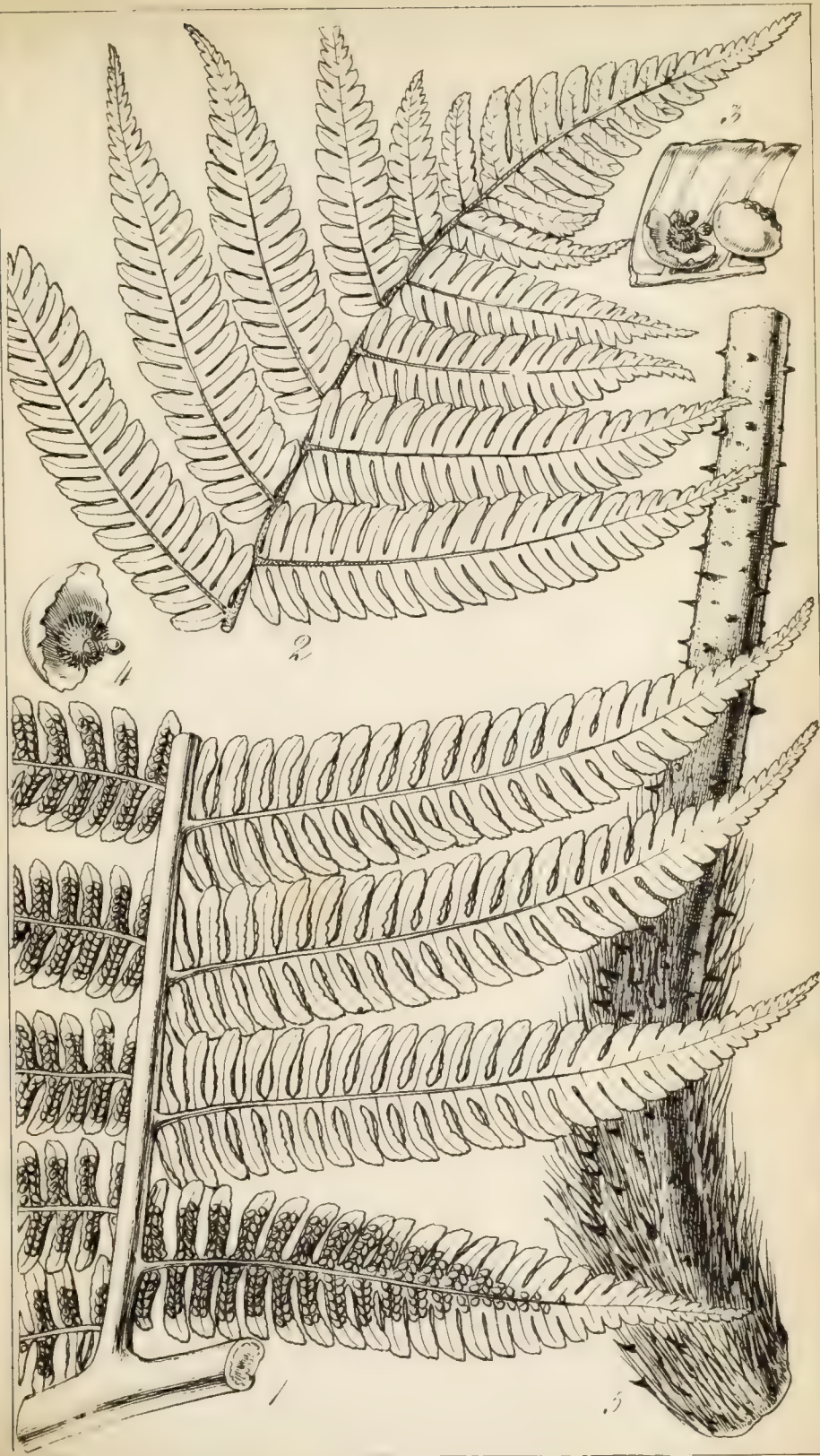
Cyathea Beyrichiana. Presl, Tent. Pterid. p. 55 (name only). Hook. Sp. Fil. p. 21.

Alsophila stipulacea. Beyrich, Herb.

HAB. Brazil; *Sellow, Beyrich. Rio Janeiro, Gardner, (n. 135).*

This again is a Fern, with as much claim to be placed in *Hemitelia* as in *Cyathea*. Could we see the involucre in its young state, we should probably find it covering the whole sorus with a globose membrane: but, in a more advanced stage, it is quite open on the outer or upper side, towards the margin of the segment; but still covering the sorus like a hood. We shall have occasion to observe a similar structure in the Ceylon *Cyathea Walkeræ*.—(See our TAB. DCXLVII.)

Fig. 1. Lower portion of a primary pinna. f. 2. Upper portion of ditto: nat. size.—f. 3. Portion of a segment, with sori. f. 4. Sorus: magnified.—f. 5. Base of a stipes: nat. size.



TAB. DCXXIV.

PODOCARPUS PURDIEANA. Hook.

Foliis lanceolatis superne latioribus obtusis cum mucrone obtuso basi attenuatis sessilibus utrinque concoloribus, pedunculis solitariis unifloris, drupa receptaculi bifidi longitudine subglobosa apiculo obtuso vix obliquo.

HAB. Woods on mountain ridges, on the estate of Dunrobin Castle, the property of J. Tasker, Esq. St. Mary in the East, Jamaica; at an elevation of about 2,500 to 3,500 feet above the level of the sea. Wm. Purdie.

No one can look at this plant by the side of *Podocarpus coriacea*, (see *Lond. Journ. of Botany*, v. 1, p. 656, tab. xxi.), whether in living or dried specimens, without being satisfied of the propriety of considering them two distinct species: yet it is difficult in words to discriminate them. Both inhabit the same mountain regions in Jamaica, though not at the same elevations: yet Mr. Purdie was at no loss to perceive their differences; and to him, while on a mission as Botanical Collector for the Royal Botanic Gardens of Kew, we are wholly indebted for our knowledge of the present one. Besides the disparity in the form and size of the foliage, Mr. Purdie says; "While *P. coriacea* only attains a height of 50 feet, and a diameter of 2 feet, this new kind reaches to 120 feet or more, and is really one of the noblest trees in the island. Its growth is rapid. One tree, felled by the proprietor, measured 3 feet 6 inches in diameter, at 6 feet from the ground; and at 39 feet from the ground, 2 feet 9 inches, without a branch up to that height. Many of the branches even afford good timber." Some of the leaves are between 5 and 6 inches long.

Fig. 1. Immature fruit:—*magnified*.



Burkeanæ.

N. O. Asclepiadææ.

TAB. DCXXV.

SCYTANTHUS GORDONI. *Hook.*

Corolla margine intusque glaberrima.

Stapelia Gordoni. *Mass. Stap. t.* 40.

HAB. South Africa. Great Namaqua, near the Orange River.

Colonel Gordon, Burke.

The generic character, and some remarks relating to another species of this genus, will be found at our TABS. DCV, DCVI. The present is the original species, first detected by Colonel Gordon, and only known to the public through the figure given of it in Masson's "*Stapelie*," in 1796, from a drawing made by its discoverer. So strange a form of *Stapelia* did not receive the credit it deserved from the cultivators of this singular group of plants; and by many it was considered an exaggerated, if not a fictitious representation. Mr. Burke's recent discovery of it again, has only proved the correctness of Colonel Gordon's representation; and living plants are now in the possession of the Right Hon. the Earl of Derby, at his seat of Knowsley, Lancashire. The present is much smaller in every part than the *Scytanthus Burkei*, and has the corolla quite glabrous.



TAB. DCXXVI.

PHOLISMA ARENARIUM. *Nutt.*

GEN. CHAR. *Pholisma Nutt.*—*Calyx* profunde 6-partitus, laciniis lineari-subspathulatis. *Corolla* monopetala infundibuliformis, limbo subregulari 6-lobo, lobis rotundatis plicatis æstivatione imbricatis. *Stamina* 6, supra medium tubi inserta, inclusa, uniseriaria, æqualia, lobis corollæ alternantia. *Filamenta* brevia. *Antheræ* oblongo-ovatae obtusæ, biloculares, loculis longitudinaliter prope marginem dehiscentibus. *Ovarium* superum subglobosum ad circumferentiam multiloculare, loculis uniovulatis; ovulis ad angulum internum circa axin crassissimum affixis. *Stylus* elongatus crassiusculus inclusus. *Stigma* dilatatum, centro depresso, margine lobato-dentato. *Fructus* (immaturus) baccatus? loculis et seminibus ut in ovario. *Semina* ex angulum interiorem pendentia.—Herba succulenta colorata in arenosis Californiæ proveniens, facie Orobanchis, aphylla. Caulis simplex squamosus. Flores parvi densissime spicati, ut videtur ebracteati.

Pholisma arenarium. Nutt. mst.

HAB. Monterey and St. Diego, California. *Mr. Nuttall.*

A very remarkable new genus, discovered by Mr. Nuttall, evidently nearly allied to the equally little known *Corallophyllum* of Humboldt and Kunth, and which will probably with it form a distinct natural order near *Orobanchææ*, but with a widely different fruit. The two genera precisely accord in their succulent texture and in the absence of verdure, in the general structure of their calyx, corolla, pistil and ovary, or young fruit: but *Corallophyllum* has a coralloid or fungoid substance, instead of leaves or scales, an 8-lobed corolla, with 8 stamens, arranged in two series, and it is an inhabitant of Mexico.

Fig. 1. Flower, before expansion. *f. 2.* Perfect flower. *f. 3.* The corolla laid open, and pistil. *f. 4, 5.* Stamens. *f. 6.* Section of ovary. *f. 7, 8.* Stigmas in different states. *f. 9.* Immature fruit. *f. 10.* Transverse, and *f. 11,* vertical section of the same:—*magnified.*



TABS. DCXXVII, DCXXVIII.

LOMARIA COLENZOI. *Hook. fil.*

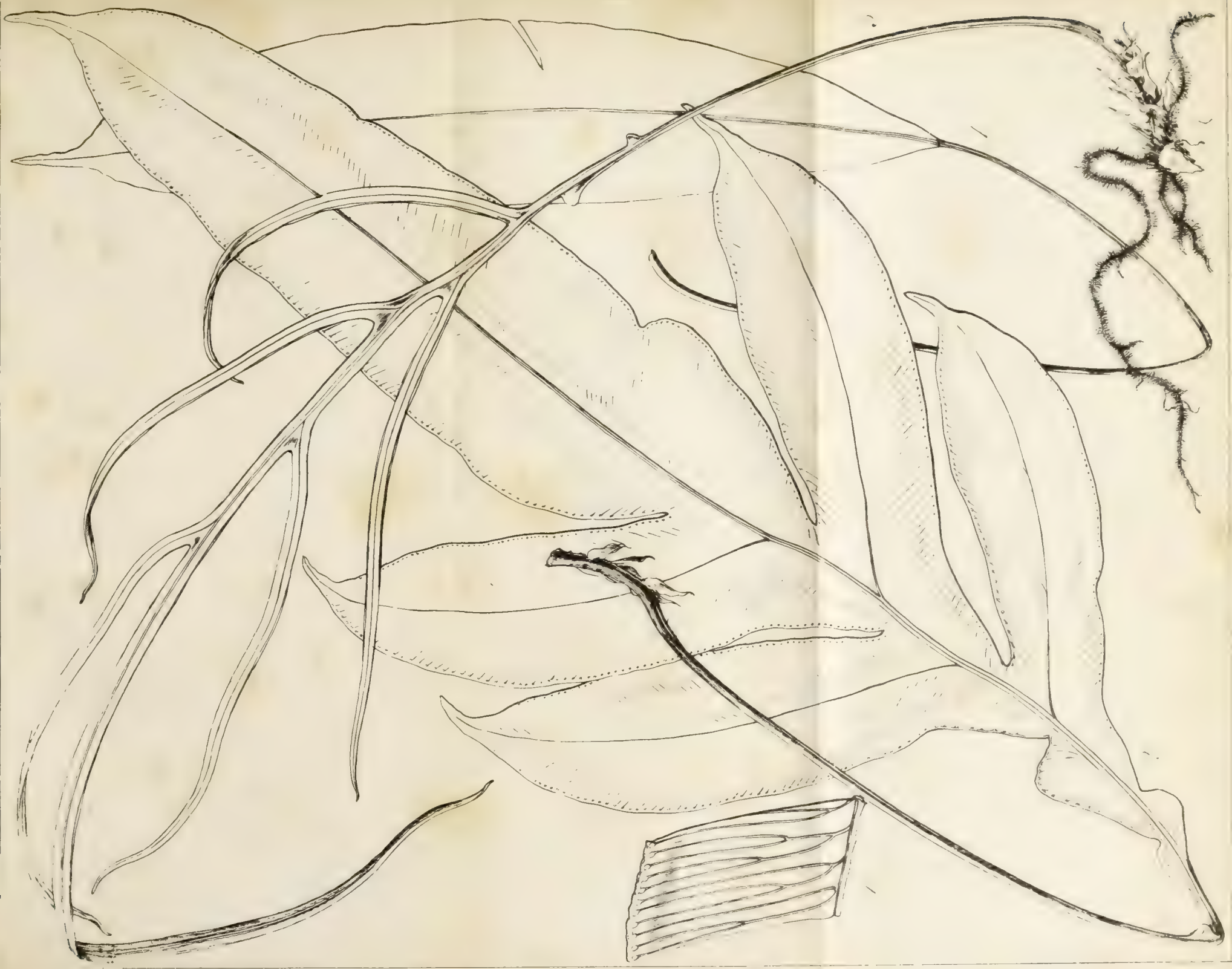
Caudice repente squamoso, frondibus longe stipitatis, sterilibus lato-lanceolatis integris v. ovato-lanceolatis profunde pinnatifidis, laciniis utrinque 2-3 late ovato-lanceolatis terminali longiore omnibus acuminatis marginatis integerrimis, venis approximatis fere horizontalibus bi-trifurcatis parallelis apicibus liberis clavatis, fertilibus pinnatifidis laciniis lineari-acuminatis.

Lomaria heterophylla. *Colenso in Tasm. Journ. of Nat. Hist. ined. (not Desvaux).*

HAB. N. Zealand, Port Nicholson; *J. T. Bidwill, Esq.* In deep woods, near the Lake Waikaré; *W. Colenso, Esq.*

Allied to the Brazilian *Acrostichum heterophyllum*, Raddi, so far as the barren fronds are concerned, which are the only ones figured by that author; yet very distinct in the much longer stipes, more coriaceous frond, closer and less distinct veins, and broader and fewer segments. The sterile and fertile fronds, as will be seen by our figure, are extremely different. They have been detected by Mr. Colenso as much as 3 feet long. *J. D. H.*

Fig. 1. Sterile undivided frond. *f. 2.* Sterile pinnatifid one. *f. 3.* Fertile frond; *nat. size* (but small specimens). *f. 4.* Portion of the sterile frond:—*magnified.*



TAB. DCXXIX.

MYRTUS PEDUNCULATA. *Hook. fil.*

Frutex, ramis divaricatis rigidis, ramulis copiosis brevibus, foliis (parvis) obovatis obtusis brevi-petiolatis punctulatis integerimis coriaceis glabris, pedunculis axillaribus unifloris folio duplo longioribus, apice hibracteatis, petalis 5.

HAB. New Zealand, Northern Island, near the village of Ruatuhuna, and also near the Lake Waikaré. *W. Colenso, Esq.*

Frutex 10-12-pedalis, ramis divaricatis, cortice cinereo tecta. *Ramuli* copiosi, breves, foliosi. *Folia* opposita vix semiunciam longa, coriacea, obovata, obtusa, brevissime petiolata, punctulata, obscure venosa, utrinque glaberrima, subtus pallidiora. *Pedunculi* axillares, solitarii, graciles, uniflori, folio duplo longiores, sub florem hibracteati; bracteis oppositis, tubo calycis 3-plo brevioribus, oblongis, appressis. *Calyx* 5-lobus, lobis latis. *Petala* 5, punctata. *Bacca* parva, aurantiaca, 2-locularis, 4-5-sperma.

The flowers of the plant figured, were not fully expanded. The berries on a separate specimen are small, orange-coloured, containing 4-5 seeds. *J. D. H.*

Fig. 1. Flower-bud. *f. 2.* leaf:— *magnified.*



TAB. DCXXX.

FAGUS FUSCA. *Hook. fl.*

Foliis remotiusculis coriaceo-membranaceis perennantibus ovatis acutis grosse serratis basi cuneatis integerrimis penninerviis brevi-petiolatis demum fuscescentibus, floribus lateralibus terminalibusque, masc. ternis pedunculatis nutantibus pubescentibus, fœmineis sessilibus solitariis, cupulis alatis valvarum dorso basi lamellato-cristatis, fructus angulis lato-alatis apice subhirsutis dentatis.

Betuloides fusca. Banks and Soland. mss.

HAB. New Zealand, Northern Island; *Banks and Solander*, 1749; *Bidwill* (masc.); *Dieffenbach*. Wangarei and Poverty Bay; *Colenso* (fœm). *Hokianga*; *Edgerley*.

A handsome tree, 40-60 feet high, called "*Hutu*" by the natives. Branches striated, red brown. Branchlets clothed with minute pubescence. Leaves about an inch long, quite glabrous, ovate, acute, coarsely, almost incisely, serrated, the base cuneate entire, between coriaceous and membranaceous, at length becoming brownish, the nerves conspicuous. Flowers abundant, lateral and terminal. We possess copious male specimens from Mr. Bidwill; in these the flowers are ternate, pedunculate, drooping. Perianth turbinate, 5-6 toothed, downy as well as the peduncle. Stamens 5-6 in each perianth. Filament slightly protruded. Anthers oblong. Female flowers mostly terminal on short branchlets. Of the fructiferous plant (see TAB. DCXXXI.) we have fine specimens from Mr. Colenso. The cupule is about the size of a large pea, with longitudinal wings, the backs of the valves crested near the base with transverse lamellæ, pubescent. Nut slightly hairy, having 3 longitudinal wings, and toothed at the top.

Fig. 1. Peduncle, with male flowers :—magnified.



Colensoanæ.

N. O. Cupuliferæ.

TAB. DCXXXI.

FAGUS FUSCA. *Hook. fil.*

(FEMALE PLANT, with fruit. See the description, under the preceding TAB. DCXXX.)

Fig. 1. Fruit. *f. 2.* Nucule removed from the cupule:—
magnified.





TAB. DCXXXII.

CALLIXENE PARVIFLORA. *Hook. fil.*

Caule filiformi ramoso basi repente, foliis remotis distichis patentibus lineari-ellipticis nervosis acutis subcoriaceis, floribus terminalibus solitariis brevissime pedunculatis bracteatis, perianthii laciniis ellipticis concavis 3 interioribus paululum minoribus.

HAB. New Zealand, Northern Island. At the foot of large trees in the Beech forest, on the ascent of the mountains from Lake Waikaré. *W. Colenso, Esq.*

The genus *Callixene*, and but one species, has hitherto been supposed to exist only in the Falkland Islands and in Antarctic South America; and the discovery of the present in New Zealand by Mr. Colenso, is another proof of the singular botanical analogies that exist between those two very remote countries. It is even difficult to assign specific differences between the two, except they are to be found in the much smaller flowers of the present one, with the unequal sepals, and the larger and more remote foliage, and the greater stature of the entire plant; peculiarities which may, however, be due to the better soil and climate. *J. D. H.*

Fig. 1. Flower. *f. 2.* Stamens and pistil. *f. 3, 4.* Sepals. *f. 5.* Pistil. *f. 6.* Section of the ovary. *f. 7.* Fruit. *f. 8.* Section of ditto. *f. 9.* Seed:—*magnified.*



TAB. DCXXXIII.

LORANTHUS (DENDROPHTHOE) COLENZOI. *Hook. fil.*

Ramis teretibus, foliis obovato-rhombeis coriaceis obtusis petiolatis subaveniis, pedunculis axillaribus subquinquefloris, floribus longitudine fere foliorum, petalis 4, ungue basi dilatato lamina angusto-ovata 4-plo longiore.

HAB. New Zealand, Northern Island. Abundant, growing parasitically on branches of *Metrosideros tomentosa*, near Lake Waikaré. *W. Colenso, Esq.*

For the knowledge of this fine *Loranthus*, which displays a profusion of scarlet blossoms, we are indebted to Mr. Colenso. It is allied to *L. tetrasepalus*, (Linn. fil.) of the same country, and it belongs also to the same section; but may be easily recognised by the much larger size of all its parts, by the greater number of flowers on the peduncle, and the decidedly petiolated leaves. We possess another (a third) very distinct species, native of New Zealand. *J. D. H.*

Fig. 1. Flower. *f. 2.* Petal and stamen. *f. 3.* Pistil.—*magnified.*



TAB. DCXXXIV.

RANUNCULUS MACROPUS. *Hook. fil.*

Caule elongato erecto gracili glaberrimo parce ramoso, foliis longissime petiolatis flabelliformibus ternatis, foliolis cuneatis profunde 2-3 partitis, segmentis apice crenato-dentatis, pedunculis oppositifoliis elongatis erectis 1-floris, sepalis 5 obovatis petala conformia suberecta duplo superantibus, staminibus paucis, acheniis glaberrimis ovatis in stylo elongato subrecurvo sensim attenuatis.

HAB. Near the Mission Station of Kaupapa, Poverty Bay, Northern Island, New Zealand; found growing almost entirely submersed in marshy pools. *W. Colenso, Esq.*

Whole plant about 1 foot long, and but little branched. The radical petioles are rather thick, succulent, 8-10 inches long, dilated at the very base. Leaves $\frac{3}{4}$ inch long by $2\frac{1}{2}$ -3 broad, between flabellate and reniform in their circumscription. Stem about as long as the root-leaves, with 3 or 4 remote, solitary peduncles, each opposite to a cauline leaf, and longer than its petiole. Flowers small, the sepals spreading, slightly concave, 3-nerved. Petals much smaller than the sepals, suberect. Achenia smooth and glabrous, with rather a long, slightly-curved style. A very remarkable plant, from the great length of its petioles, (especially those from the root) and peduncles, and the smallness of its petals as compared with the sepals. *J. D. H.*

Fig. 1. Flower. *f. 2.* Underside of ditto. *f. 3.* Head of carpels. *f. 4.* Single carpel:—*magnified.*



TAB. DCXXXV.

GENTIANA BELLIDIFOLIA. *Hook. fl.*

Radice valida fusiformi, caulibus brevibus adscendentibus unifloris, foliis spathulatis inferioribus confertis recurvis petiolatis subnerviis, superioribus brevioribus obovatis obtusis remotis sessilibus, segmentis calycinis ovato-ellipticis acutis, corolla late campanulata v. subrotata profunde 5-fida segmentis ovatis obtusis, ovario brevi-stipitato.

HAB. New Zealand, Northern Island. On Tongariro. *J. T. Bidwill, Esq.*

Stems and branches short, and ascending; the flowering ones only elongated, 4-5 inches in length. Leaves about an inch long, apparently rather thick, their apices rounded. Flowers terminal, solitary; the calyx is 4 lines long. Corolla 7-8 lines long, between campanulate and rotate, yellow, and streaked when dry with darker lines. Anthers from the curving of the apex of the filament, extrorse after the pollen is emitted. Ovary elongated, stipitate; the stigma bilabiate. Allied to the *G. saxosa*, Forst. from which, according to the drawing in the British Museum, it differs in the much smaller size, shorter leaves, which are broader in proportion, and especially in the shorter and broader corolla. *J. D. H.*

Fig. 1. Corolla laid open:—magnified.



TAB. DCXXXVI.

GENTIANA GRISEBACHII. *Hook. fil.*

Annua? caule erecto gracili e basi ramoso, ramis superioribus furcatis elongatis ad apices 1-floris, foliis inferioribus petiolatis spathulatis flaccidis apicibus rotundatis, superioribus sessilibus ovatis subacutis, floribus erectis, segmentis calycinis linearibus acuminatis dorso nervosis, corolla rotato-campanulata segmentis elongato-ovatis acuminatis, ovario stipitato.

HAB. New Zealand, Northern Island. On downs between Rotuari and the base of Tongariro. *J. T. Bidwill, Esq.*

A very elegant and distinct species, belonging to Dr. Grisebach's section *Antarctophila*, to which also Forster's *G. montana* is referrible, as well as the Magellanic species, with which the present resembles in habit of growth. Stems cylindrical, slender below, increasing a little in diameter upwards, a span long. Radical leaves none, or perhaps withering as the stems elongate; cauline ones apparently flaccid, $\frac{3}{4}$ inch long, $2\frac{1}{2}$ lines broad, the upper $\frac{1}{3}$ inch long. Flowers rather small, terminal at the apices of the branches, solitary. Calyx narrow at the base, 5-angled, deeply divided into 5 linear segments, each with a stout, prominent nerve on the back, $\frac{1}{4}$ shorter than the corolla. Corolla $\frac{1}{3}$ inch long, yellow when dry, subrotate. Anthers as in the *G. bellidifolia*. *J. D. H.*

Fig. 1. Flower. *f. 2.* Corolla laid open. *f. 3.* Section of the ovary :—*magnified.*



TAB. DCXXXVII.

VIGNA HIRTA. *Hook.*

Caule volubili retrorsum hirsuto, foliolis oblongo-acuminatis hirsutis intermedio petiolulato, pedunculo longissimo 2-floro glaberrimo, calyce leguminibusque rufo-villosis.

HAB. Interior of South Africa. *Burke.*

This species blossomed in the stove of the Right Hon. the Earl of Derby, and was raised from seeds sent from the interior of South Africa by Mr. Burke. The leaves are of a peculiarly thin and membranaceous texture, many of the leaflets are 5-6 inches long; the stipules are small, ovato-sagittate; the flowers moderately large, pale yellowish-green; the style is densely ciliated on the underside beneath the stigma; the pods 4-5 inches long, and, equally with the calyx and young stems, clothed with ferruginous hairs.

Fig. 1. Vexillum. f. 2. Ala. f. 3. Carina. f. 4. Flower, from which the petals are removed. f. 5. Pistil. f. 6. A fruit:—magnified.



TAB. DCXXXVIII.

CYATHEA INTEGRÆ. *J. Sm.*

Inermis, frondibus 2-3-pinnatis, pinnis lato-lanceolatis acuminatis pinnatifidis, segmentis lato-ovatis acutis subserratis glabris, soris plerumque rachin versus, involucris membranaceis primum hemisphæricis apice evanescentibus demum in lobis 4-5 subregularibus patentibus fissis.

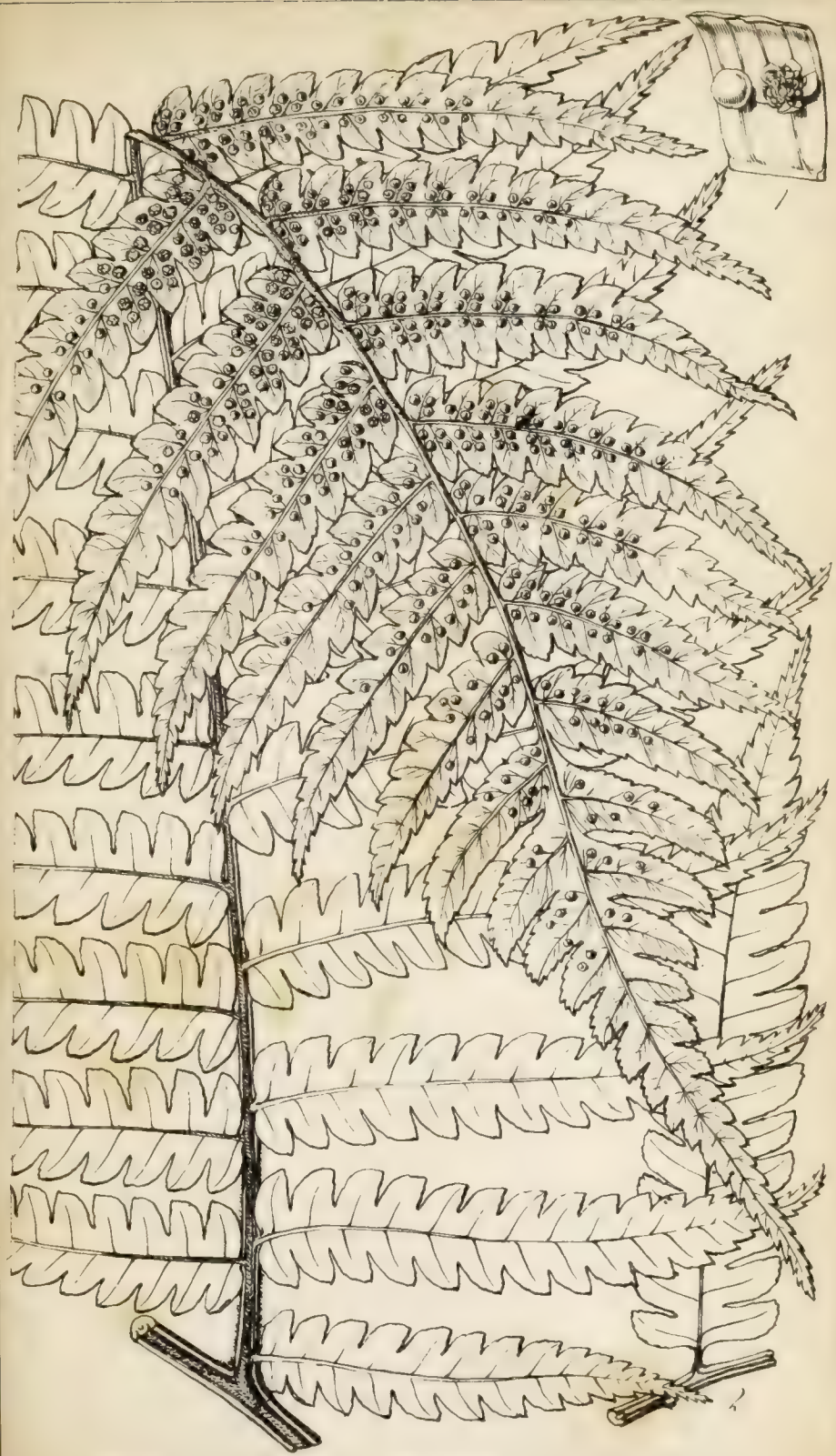
Cyathea integra. *J. Sm. En. Fil. Philipp. in Hook. Journ. of Bot. v. 3, p. 419 (name only). Hook. Sp. Fil. v. 1, p. 26.*

β. petiolata; pinnulis sæpissime petiolatis. *C. petiolata*. *J. Sm. l. c. p. 419 (name only).*

HAB. Amboyna; (*Herb. Hook. from P. B. Webb, Esq.*) Luçon; *Cuming Herb. Philipp. n. 120.*—*β*, Isle of Mindora, Philippine Islands; *Cuming no. 359.*

The pinnules are less deeply divided than any of the species with which I am acquainted, and might be said to be rather lobed than pinnatifid; so that much of the fructification is placed below the sinus, between it and the costa, and all the sori are remote from the costa, as the forking of the nerves is at a distance from it.

Fig. 1. Portion of a fertile segment, with fruit; *magnified.*
f. 2. Pinnule of var. *β*:—*nat. size.*





TAB. DCXXXIX.

FAGUS SOLANDRI. *Hook. fil.*

Ramis nigro-fuscescentibus, ramulis pubescentibus foliosis, foliis undique subdistichis breviter petiolatis parvis oblongo-ellipticis utrinque rotundatis margine integerrimo siccitate recurvo, inferne appresse pubescenti-tomentosis cinerascens, floribus (immaturis) ♂ aggregatis sessilibus.

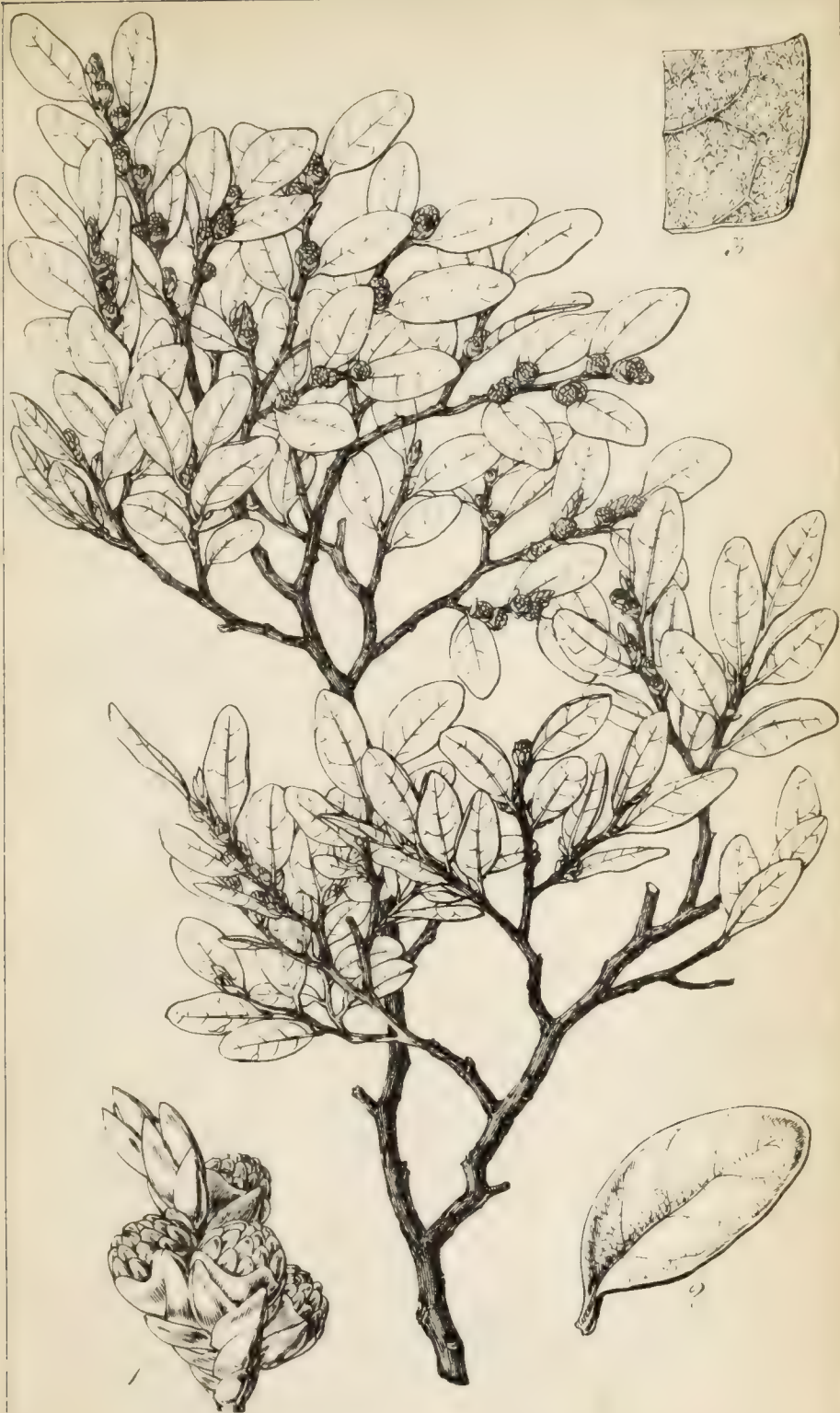
Myrtilloides cinerascens. *Banks and Sol. mss. in Herb. Banks.*

HAB. New Zealand. First discovered, but without flower or fruit, at Totara Nui, by *Sir J. Banks* and *Dr. Solander*, in 1769. Waiwatu; Port Nicholson. *J. T. Bidwill, Esq.* forming a tree 100 feet high. Mount Egmont; *Dr. Dieffenbach*. Tapatahi, a village near the E. coast, forming a tree 30-60 feet high; *W. Colenso, Esq.*

Branches slightly warted, of a dark-brown or fuscous black colour, their apices covered with yellowish, apparently glandular pubescence. Leaves rather loosely placed, plane and horizontal, stiff, the petioles 1 line long, pubescent, dark-coloured; lamina $\frac{1}{3}$ - $\frac{1}{2}$ inch long, the upper surface scarcely shining, minutely reticulated, pale greenish-brown when dry; under surface ash-coloured with a very closely appressed tomentum, not however wholly concealing the reticulated venation. Male flowers clustered, 3 or more together, nearly sessile, densely clothed with red-brown, shining, imbricating, scarious bracteæ. Perianth cup-shaped, about 5-toothed, 5-angled, and 10-nerved; the teeth somewhat irregular, and often acute, the peduncle very short and hairy. Stamens 8, red-brown, $\frac{3}{4}$ lin. long, filaments as long as the perianth. Anthers exerted.

First discovered by *Sir J. Banks* and *Dr. Solander*, whose ms. name is quoted above. *Mr. Dryander*, after examining flowering specimens of a similar but distinct species, brought by *Mr. Menzies* from Dusky Bay, altered the name to *Cliffortioides oblongata*. *J. D. H.*

Fig. 1. Cluster of flowers, not fully expanded. *f. 2.* Leaf. *f. 3.* Portion of ditto, seen from the underside:—*magnified.*





TAB. DCXL.

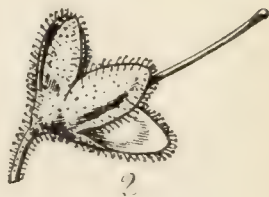
VERONICA NIVEA. *Hook. fil.*

Fruticosa procumbens, ramis brevibus, foliis confertis decussatis patentibus nunc subsecundis ovatis rigidis brevissime petiolatis inciso-crenatis glabris, pedunculis lateralibus ramos superantibus, bracteis ovatis calycibusque glanduloso-hirsutis, racemis corymbosis 4-6 floris segmentis calycinis ovatis, corollæ lobo inferiore bifido.

HAB. New Zealand. On Tongariro, a mountain, whose altitude is estimated at 6,200 feet above the level of the sea. *J. T. Bidwill, Esq.*

A most distinct and well-marked fruticose species of *Veronica*, and very alpine in its locality. The stems are, for the size of the plant, stout, procumbent, 4-6 inches long; the branches short, ascending, leafy. Leaves closely placed, spreading on four sides, except when the branch happens to be procumbent, and then they point upwards, subsecund. Peduncles erect, and, as well as the bractees, pedicels and calyces, densely clothed with glandular hairs. Pedicels 2-4 lines long, the upper ones gradually shorter. Corolla pure white, with the lower lobe bifid in the flower examined, (possibly by accident). It is of this *Veronica* Mr. Bidwill speaks, when describing his ascent of Tongariro, in his *Rambles in New Zealand*: "A few patches of a most beautiful snow-white *Veronica*, which I at first took for snow, were growing among the stones, but they ceased before I had ascended a third part of the way."

Fig. 1. Flower. f. 2. Calyx and pistil :—magnified.



TAB. DCXLI.

CABOMBA PIAUHYENSIS. *Gardn.*

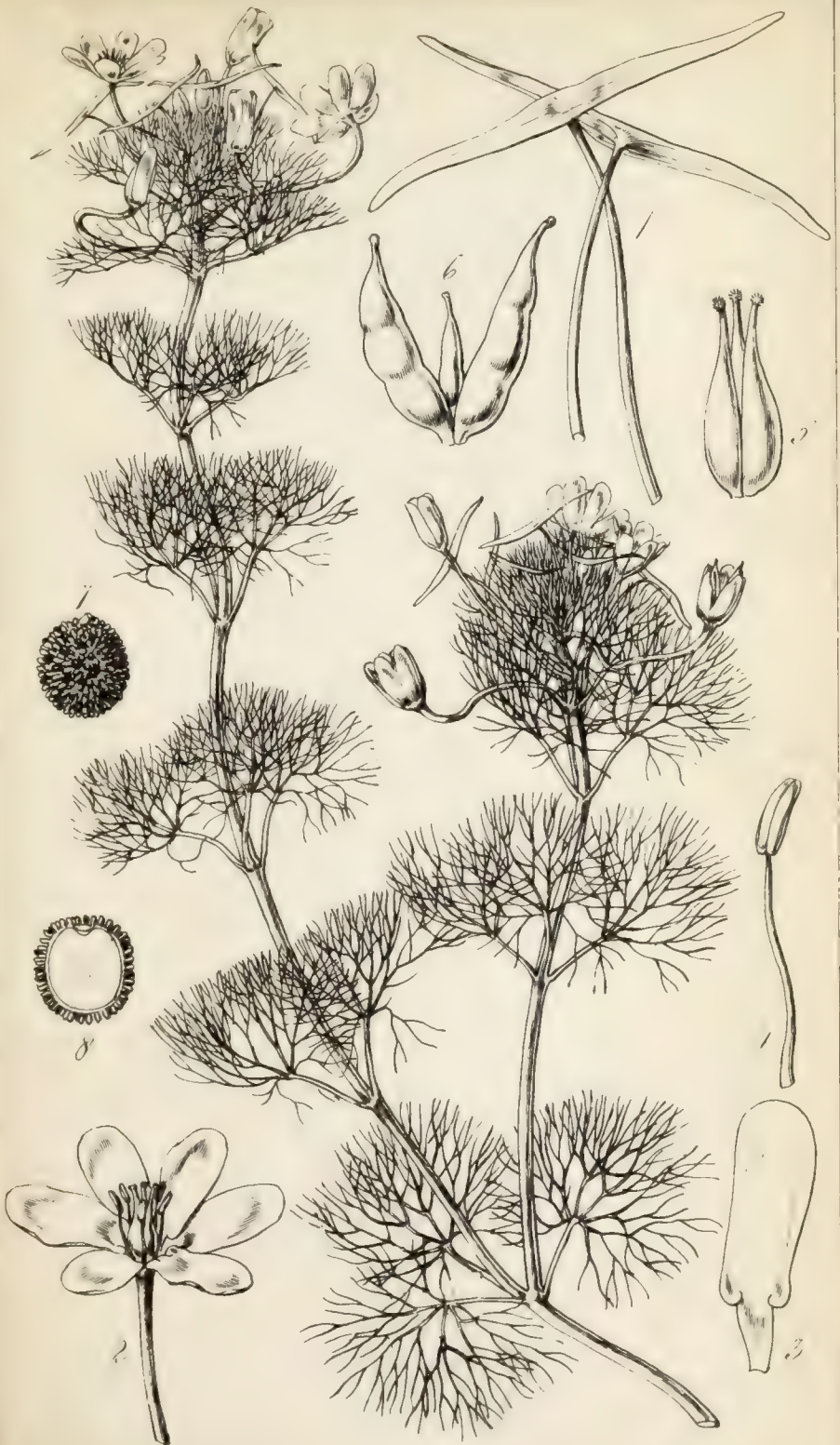
Glaberrima, foliis natantibus peltatis linearibus, floribus roseis, antheris extrorsis lineari-oblongis, carpellis 2-3, seminibus echinatis.

Cabomba Piauhyensis. *Gardn. Herb. Fl. Bras. n. 2478.*

HAB. In the stagnant waters of a large lake at Algadoës, in the south-west of the province of Piauhy, Brazil. July, 1839.

Much diversity of opinion has existed among Botanists as to the place which *Cabomba*, and its ally *Brasenia*, ought to hold in the natural series. Jussieu put *Cabomba* among his *Junci*, by the side of *Scheuchzeria*, with the remark, "An *Ranunculis* affiniore?" Richard, who first established a distinct order of the two genera, considered them monocotyledonous. De Candolle, in his "Prodromus," regards them as a section of *Podophylleæ*, doubting if they may not be a tribe of *Nymphæaceæ*, while Lindley, in his Natural System of Botany, makes them form a suborder of *Nymphæaceæ*, remarking that they only differ from that order in having definite seeds and distinct carpels, while *Brasenia* is closely related to *Caltha*. In his Elements of Botany he elevates them into a distinct order between *Podophylleæ* and *Cephalotaceæ*, in the Albuminous section of dissolved Exogens. Torrey and Gray do the same, placing it between *Berberidaceæ* and *Ceratophyllaceæ*. Endlicher, in his Genera Plantarum, also forms a distinct order of them, and gives it an intermediate station between *Nymphæaceæ* and *Nelumboneæ*. A careful examination and consideration of the flowers of the four species of which the genus *Cabomba* now consists, have led me to an opinion somewhat at variance from all those which we have been considering regarding their affinities. To me they appear true Ranunculaceous plants, which ought to constitute a distinct tribe between *Ranunculeæ*, DC., and *Helleboreæ*, DC., for the following reasons.—In the first place, the habit of *Cabomba* is quite that of the *Batrachium* section of *Ranunculus*, while *Brasenia* has that of *Caltha*: secondly, they exhibit the *extrorse* anthers of the greater part of the *Ranunculaceæ*, not *introrse*, as stated by all authors: and thirdly, they present the distinct carpels, the pendulous ovules, and albuminous seeds of *Ranunculaceæ*. It is true that the structure of the ovule in *Cabomba* rather resembles *Nymphæaceæ* than *Ranunculaceæ*, but the difference is not greater than is observable between that of *Nymphæaceæ* and *Nelumboneæ*, which scarcely can be considered as more than tribes of one group. *G. Gardner.*

Fig. 1. Floating leaves. f. 2. Flower. f. 3. Petal. f. 4. Stamen. f. 5. Pistil. f. 6. Carpels. f. 7. Seed. f. 8. Seed laid open:—*magnified.*



TAB. DCXLII.

CABOMBA CAROLINIANA. *A. Gray.*

Foliis natantibus peltatis ellipticis vel lineari-oblongis, petiolis pedunculisque subpubescentibus, floribus albidis, antheris extrorsis rotundato-ellipticis, carpellis 3-4 puberulis, seminibus glaberrimis.

Cabomba Caroliniana. *Gray, in Torr. et Gray, Fl. N. Am. 1, p. 55. Walpers's Repert. 1, p. 105.*

Cabomba Aubletii. *Mich. Fl. 1, p. 206.*

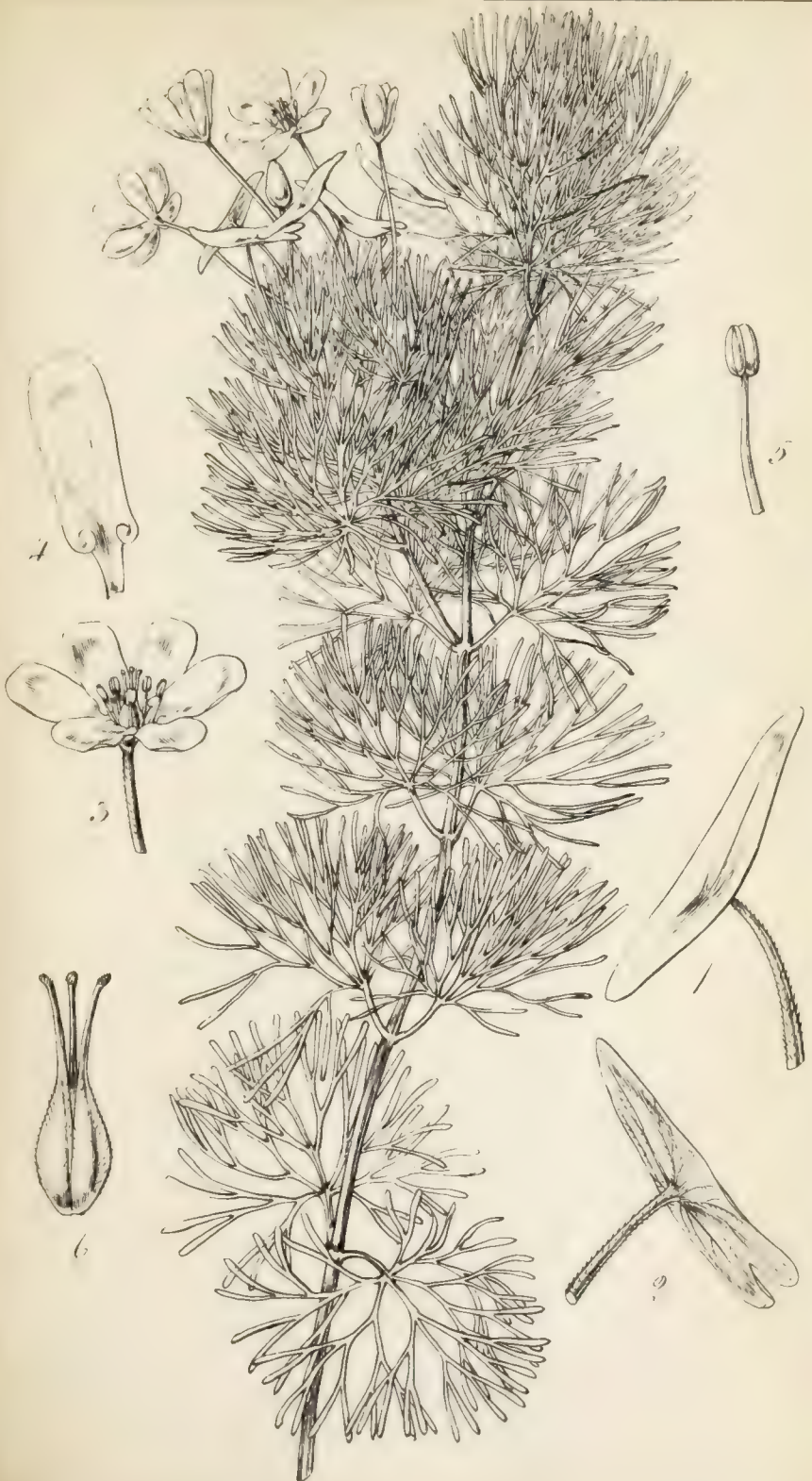
Nectris peltata. *Pursh, Fl. 1, p. 239 (excl. syn.)*

Nectris aquatica. *Nutt. Gen. 1, p. 230. Ell. Sketch, 1, p. 416. (non Willd. ex Torr. et Gray).*

HAB. In stagnant waters, from Newburn, North Carolina, to Georgia and Louisiana; *Torr. and Gray. New Orleans; Thos. Drummond, n. 47.*

As regards its floating foliage, this species is intermediate between *C. aquatica*, Aubl., and *C. Piauhyensis*, Gardn. From the former it is distinguished by these leaves being far narrower, and not unfrequently emarginate at one end; by its much shorter anthers, and less pubescent carpels and pedicels. From the latter, by its much narrower leaves; by its nearly round, not oblong, anthers; by its thicker and shorter carpels; the glabrous, not echinate, seeds; and the pubescent, not glabrous, petioles and peduncles. *G. Gardner.*

Fig. 1, 2. Upper and underside of differently formed floating leaves. f. 3. Flower. f. 4. Petal. f. 5. Stamen. f. 6. Pistils:—magnified.



TAB. DCXLIII.

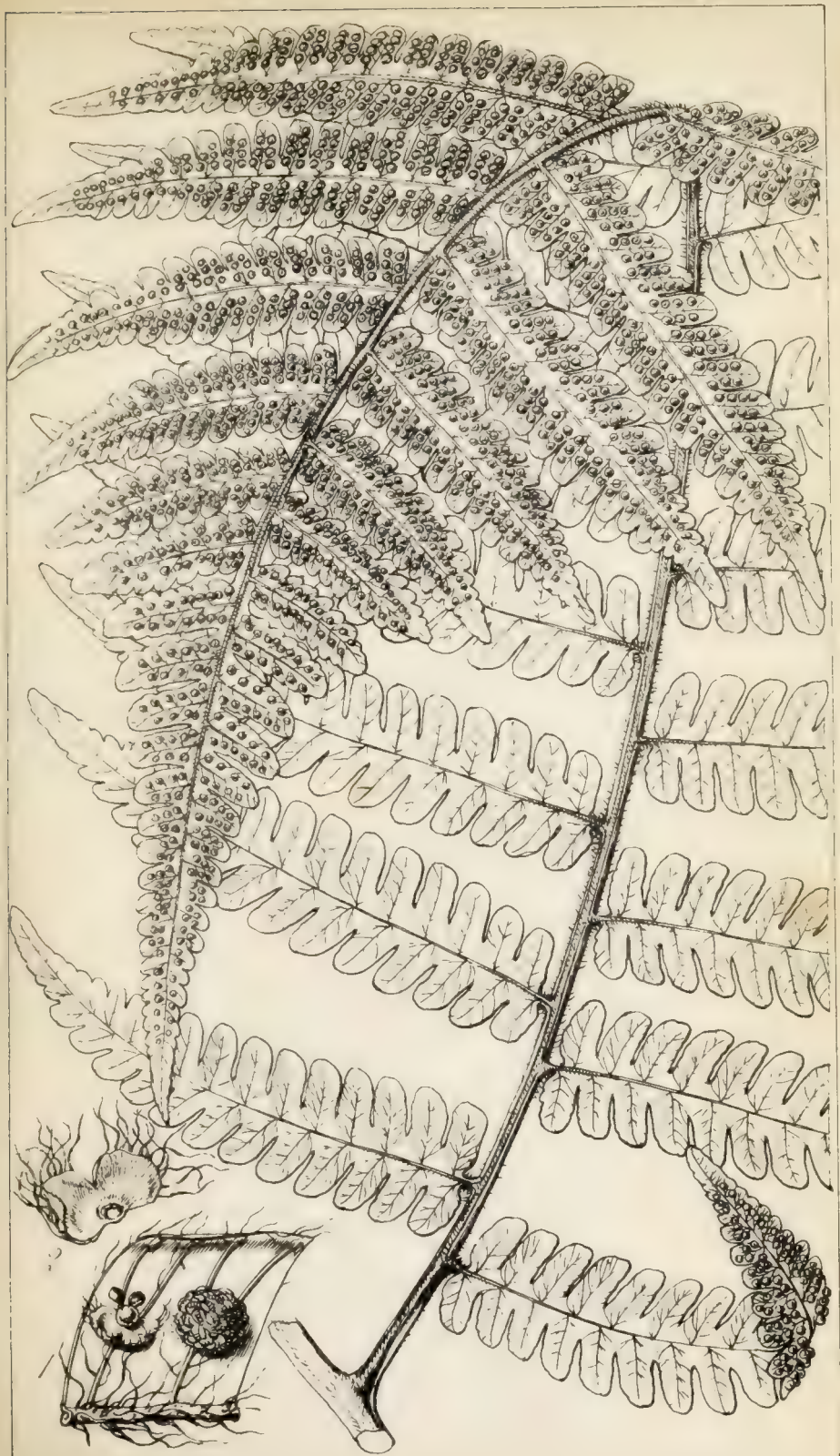
HEMITELIA? PARKERI. Hook.

Inermis? frondibus 2-3-pinnatis, rachi costa venulisque pilis divergentibus obsitis, rachi inter pinnulas alata, pinnulis sessilibus oblongo-lanceolatis obtuse acuminatis ad medium pinnatifidis subcoriaceo-membranaceis, segmentis ovatis obtusis integris, venulis liberis supra medium furcatis, soris axillaribus marginem versus, involucre parvo ciliato dimidiato sæpius ætate bifido. Hook. *Sp. Fil.* v. 1, p. 32.

HAB. British Guiana. C. S. Parker, Esq.

The winged rachis, very distinct in the upper part between the pinnules, affords a striking character to this species and the *H. ? Guianensis*; but the present is easily recognised by its copious hairs, more abundant sori, and very different involucre, which I think may be considered entirely that of a *Hemitelia*, though in general habit it approaches nearer a true *Cyathea* or *Alsophila*.

Fig. 1. Portion of a segment, with fruit. f. 2. Involucre :—*magnified*.





TAB. DCXLIV.

APODANTHES CALLIANDRÆ. *Gardn.*

Bracteis 2-3-seriatis, seriei interioris sepalisque basi subconnatis, sepalis ovato-rotundatis.

Apodanthes Calliandræ. Gardn. Herb. Fl. Bras. n. 3639.

HAB. Parasitical on the stems of a species of *Calliandra*, nearly allied to *C. cylindrocarpa* Benth., in the Province of Goyaz, Brazil. 1840.

Planta parva, parasitica, atro-fusca, glaberrima, dioica, uniflora. —*Flos Masc. desideratus.*—*Flos Fœm. Bracteæ* 6-8, latè ovatæ, imbricatæ. *Perigonium* tetraphyllum foliolis ima basi connatis, æstivatione imbricatis, subrotundis, basi ovario adhærentibus. *Pseudocarpium* ovatum, subbaccatum, uniloculare. *Stylus* brevis, cinereus, crassus, conicus. *Stigma* truncatum, sub-4-lobatum. *Fructus* subcarnosus, indehiscens. *Sporæ* plurimæ, obovato-oblongæ, ad parietem pseudocarpium affixæ.

The genus *Apodanthes* was established by Poiteau in the 3rd Vol. of the *Annales des Sc. Nat.* (1824) on a small parasitical plant, which he found in Guiana, growing upon the stems of *Casearia macrophylla*, Vahl., but of which he only obtained female flowers. In 1834, M. Guillemin constituted the genus *Pilostyles*, in the 2nd Vol. of the *Nouv. Annal. des Sc. Nat.* for a plant with a similar habit to that of *Apodanthes*, which had been sent from Chili by Bertero; but of which he only possessed male flowers. The female flowers of that species have lately been sent to this country by Mr. Bridges; and a comparison of them, and those of the plant here described, and another found in Brazil by Blanchet, with the drawing and description of Poiteau, leaves no doubt as to their all belonging to one genus. In the text to the plate, TAB. DCLIII. of the present Work, I shall give an amended character of the genus, and a synopsis of the species. *G. Gardner.*

Fig. 1. Section of a portion of the branch of *Calliandra*, with two perfect female flowers. *f. 2.* Separate flower. *f. 3.* The same, with the bracteas removed. *f. 4.* Ovary cut through, transversely: *magnified.* (The principal figure exhibits a branch of *Calliandra*, with the *Apodanthus Calliandræ* growing parasitically upon it: *nat. size.*



TAB. DCXLV.

VERONICA DIFFUSA. Hook. fil.

Suffruticosa, caulibus procumbentibus diffusis, ramis elongatis, foliis per paria remotis patentibus elliptico-ovatis acutis serratis subsessilibus glabris carnosio-coriaceis, racemis axillaribus oppositis longissimis flexuosis, bracteis parvis lineari-subulatis, pedicellis elongatis calycibusque glanduloso-pubescentibus, capsulis orbiculatis segmenta calycina lato-elliptica paululum excedentibus.

HAB. New Zealand. On Tongariro. *J. T. Bidwill, Esq.*

A spreading, straggling species, with procumbent stems, its very long and opposite lateral racemes rising upwards. These latter are 6-8 inches long, with slender pedicels an inch in length. Flowers, according to Mr. Bidwill's notes, blue and white. The habit is that of our European *V. prostrata*.

Fig. 1. Flower. *f. 2.* Calyx and pistil. *f. 3.* Fruit:—*magnified.*



TAB. DCXLVI.

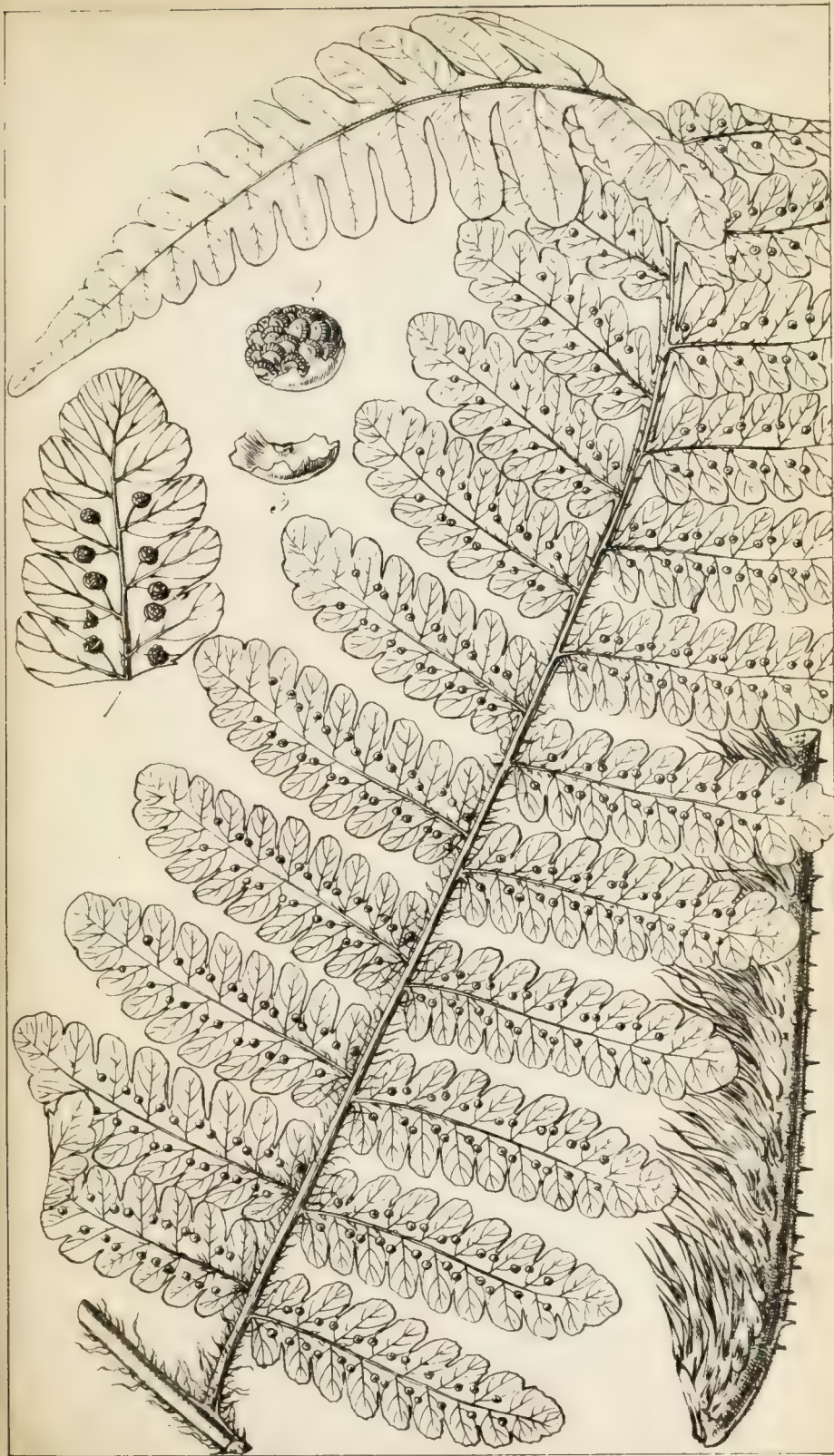
HEMITELIA HOSTMANNI. *Hook.*

Stipite ad basin aculeato rachique squamosis, frondibus bipinnatis, pinnulis oblongis valde obtusis sessilibus ad basin cuneatis membranaceis pinnatifidis v. ad medium lobatis superioribus coadunatis decurrentibus, venulis simplicibus liberis, soris remotis, ad medium venulæ inferioris inter sinum v. rachin. *Hook. Sp. Fil. v. 1, p. 31.*

HAB. Dutch Guiana. *Hostmann, n. 64.*

A very distinct and well-marked species, of which I possess a frond about 4 feet long, including the stipes, which measures a foot and a half, rich mahogany brown, on one side densely clothed with long, dark brown, glossy scales, on the other muricated with short aculei. Pinnæ remote, the largest a foot long, sessile. Pinnules pinnatifido-lobate, of a thin and flaccid texture, veins of each lobe pinnated, only the lowest pair of veinlets bearing each near the middle a solitary sorus ; so that on the pinnules the sori are distant, and form a line remote from the margin, half-way between the sinus and rachis. The upper pinnules are confluent, at first simply combined by a decurrent wing, then united into a lobed margin, and terminating in a blunt, entire acumen. The rachis of the pinnæ is rough and somewhat scaly, that of the pinnules slightly strigoso-hispid.

Fig. 1. Fertile portion of pinnule. *f. 2.* Sorus. *f. 3.* Involucre :—*magnified.*



TAB. DCXLVII.

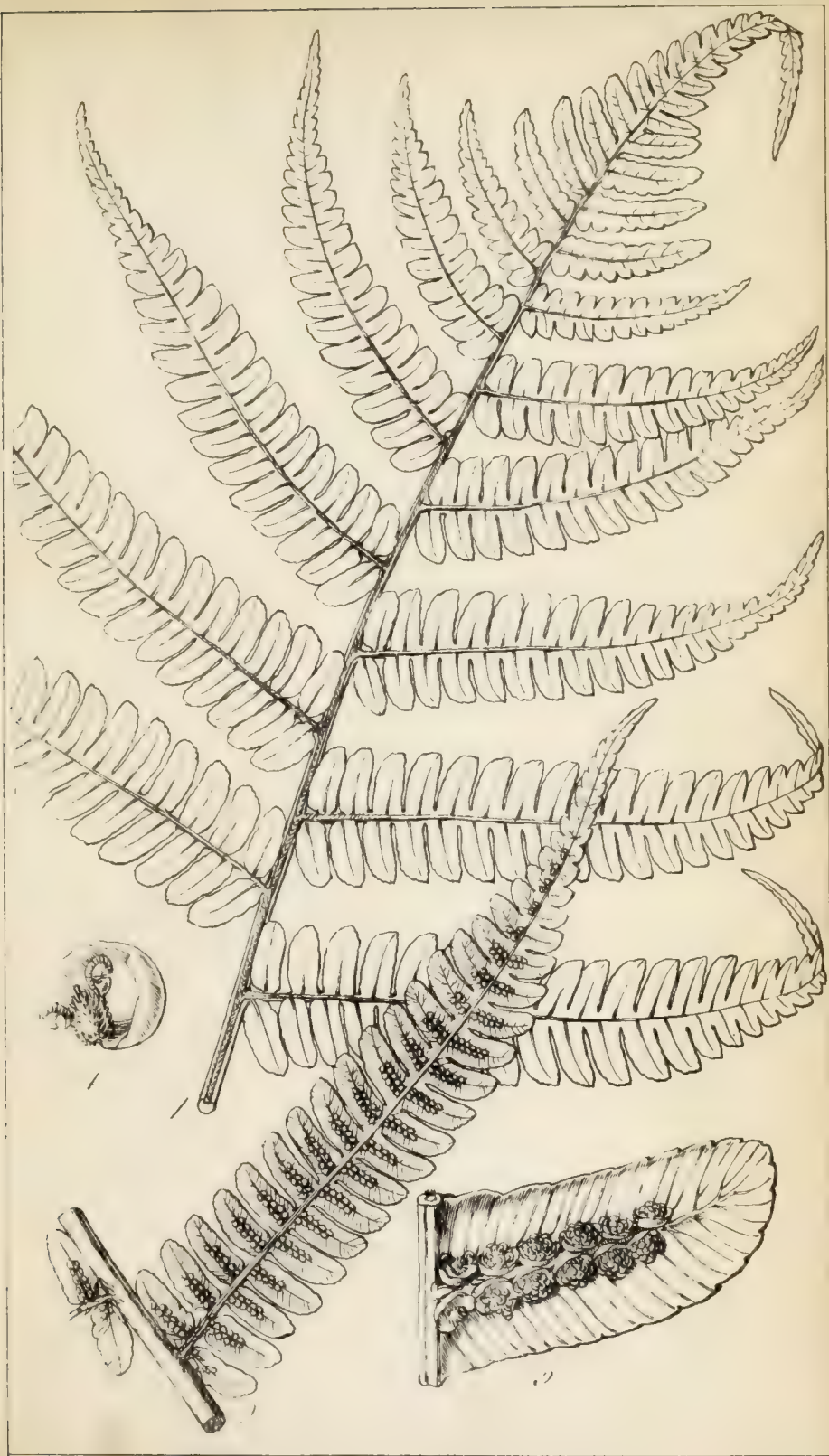
CYATHEA WALKERÆ. Hook.

Inermis, frondibus bipinnatis, pinnulis crassis coriaceis profunde pinnatifidis inferne pinnatis, pinnulis superioribus ad basin contractis segmentisque oblongis valde obtusis integris v. parum crenatis, costa inferiore plerumque squamosa, squamis deciduis, venis copiosis depressis basin et sæpe ad medium furcatis, soris ad furcaturas infimas costæ proximis, involucris magnis opacis ad latus superius solummodo quasi dehiscens in costam reflexis cuculliformibus. *Hook. Sp. Fil. v. 1, p. 24.*

HAB. Adam's Peak, Ceylon. *Mrs. Col. Walker.*

A very well marked species, which we have received from Mrs. Walker alone. Stipes and main rachis of a mahogany colour, flattened and grooved above when dry, naked, or with small deciduous scales below. Pinnules, as it were, jointed on the rachis, at the base pinnated, the pinnules being distinct, contracted at the base, hence elliptical. Texture firm, rigid, coriaceous, rich brown when dry, paler beneath. Involucres membranous, but firm, apparently bursting rather unequally, on the superior half vertically, and thus irregularly 2-lobed; this large, broad involucre, is reflected on the costa, and still covers in a measure the sorus, on the lower side, as with a hood. My specimens being advanced in fruit, I cannot certainly say that the involucre wholly surrounds the sorus when young: it is probable it does, and that the structure is analogous to that of *C. Beyrichiana*, Presl.—I do not look upon it as a dimidiate involucre, or I should place it in *Hemitelia*.

Fig. 1. Portion of a pinna, upper side. *f. 2.* Pinnule, with fructification, seen from beneath: *nat. size.* *f. 3.* Segment of pinnule, with sori. *f. 4.* Involucre and receptacle:—*magnified.*



TAB. DCXLVIII.

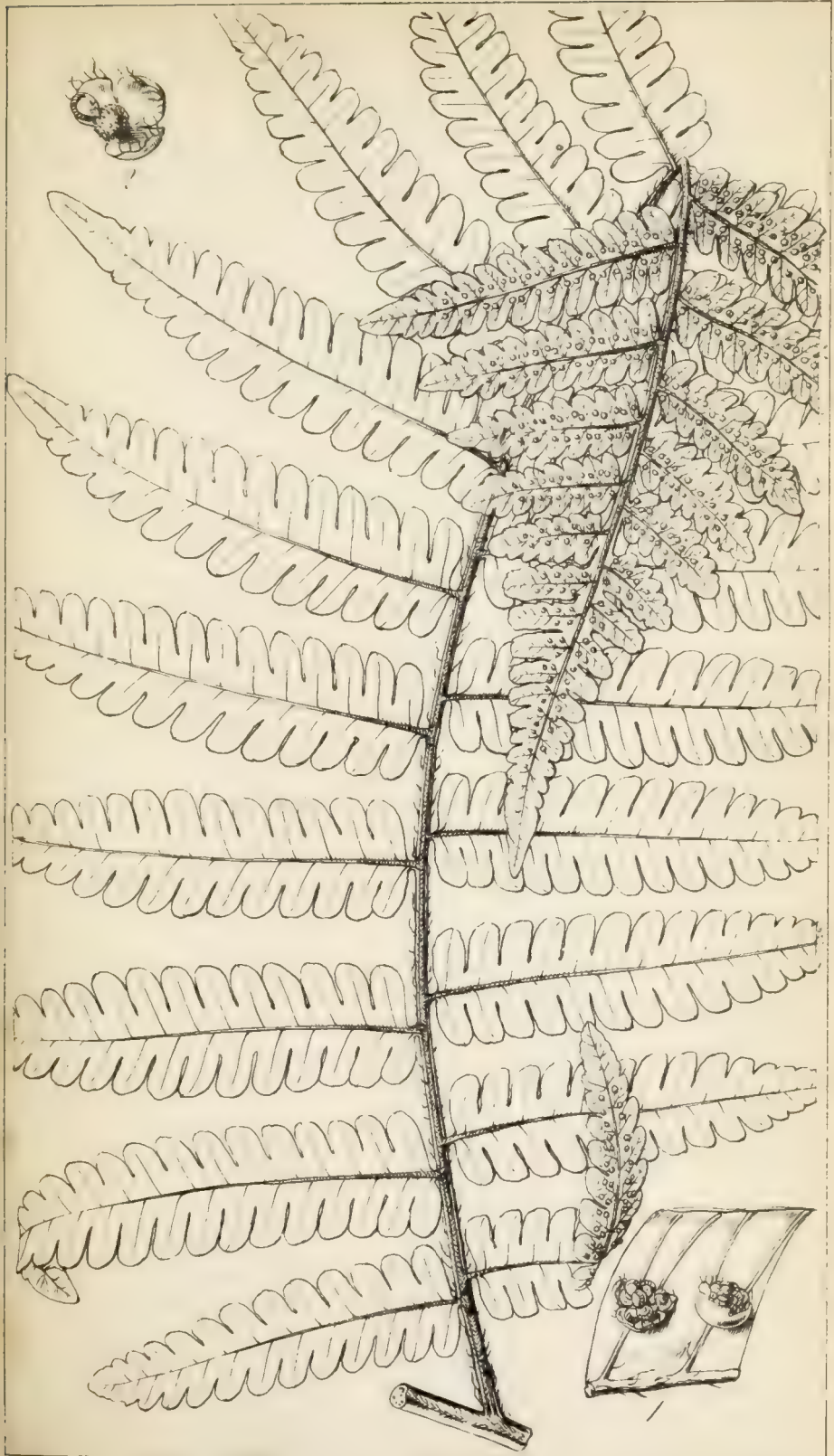
HEMITELIA? GUIANENSIS. *Hook.*

Inermis? rachi costaque inferne subsquamosa strigoso-hispidis, frondibus 2-3-pinnatis, rachi secundaria conspicue alata precipue inter pinnulas, pinnulis sessilibus oblongo-lanceolatis apicibus productis obtusis membranaceis infra medium pinnatifidis, segmentis ovatis obtusis integris, venis liberis ad medium furcatis, soris 2-3 quoque segmento axillaribus versus marginem sitis, involucre ciliato plerumque ad latus inferum sori 2-3 lobato. *Hook. Sp. Fil. v. 1, p. 31.*

HAB. British Guiana. *C. S. Parker, Esq.*

I do not find this anywhere described, nor am I clear that it should not be placed in *Cyathea*. In habit and form of the pinnules, it exhibits the closest affinity with *H. Parkeri*, Hook., but the involucre is dissimilar.

Fig. 1. Portion of a segment with sori. *f. 2.* Involucre and sorus :—*magnified.*



TAB. DCXLIX, DCL.

SCHIEDEA NUTTALLII. *Hook.*

Paniculis amplis ramosissimis, ramis capillaribus elongatis patentissimis, foliis brevi-petiolatis ovato-lanceolatis obscure penninerviis, sepalis pedicellisque glabris.

Eucladus suffruticosus. *Nutt. Mst.*

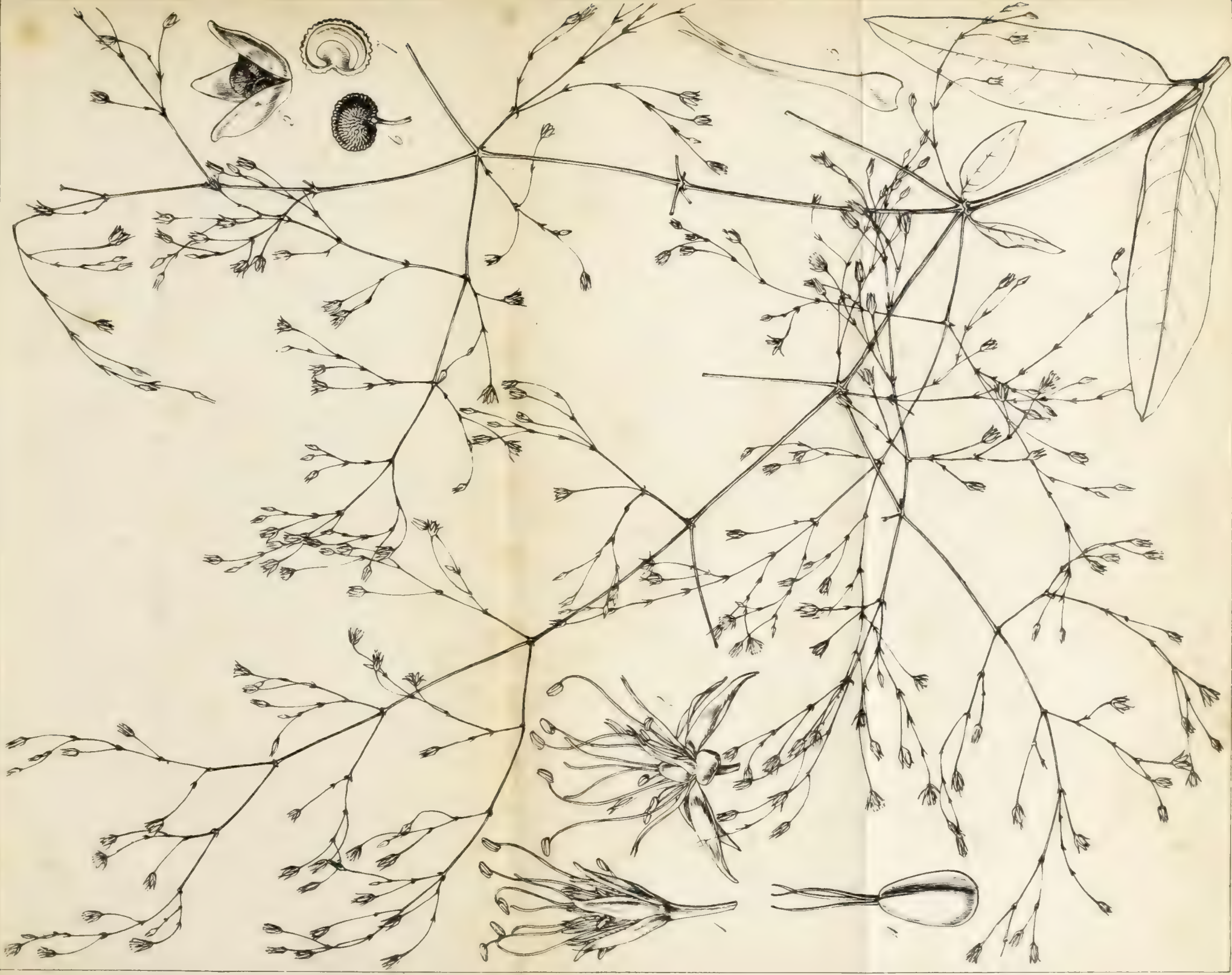
HAB. On the rocks of the Parri, Oahu, Sandwich Islands. *T. Nuttall, Esq.*, 1834.

This plant possesses the true character of *Schiedea*, (Chamisso and Schlechtendahl) a shrubby genus of Caryophylleous (or some have it Portulaceous) plants, as far as we can at present know, peculiar to the Sandwich Islands. It is extremely different from the only described species, *S. ligustrina*, Cham. and Schlecht. in its very ample panicle, smaller flowers, petioled and penninerved (not strongly 3-nerved) leaves. A third species exists in my Herbarium, which may be called *S. Menziesii*.*

Fig. 1. Flower. *f. 2.* The same, fully expanded. *f. 3.* Petal. *f. 4.* Pistil. *f. 5.* Capsule, burst open. *f. 6.* Seed and seed-stalk. *f. 7.* Seed laid open:—*magnified.*

* *Schiedea Menziesii*; panicula erecta coarctata, foliis sessilibus anguste lanceolatis longe acuminatis trinerviis, calycibus pedicellisque pubescenti-tomentosis.

HAB. Sandwich Islands; *Menzies.*



TAB. DCLI.

EUPLOCA. Nutt.

GEN. CHAR. *Calyx* 5-partitus, persistens. *Corolla* subrotato-infundibuliformis, limbo plano plicato quinquangulato, fauce nuda, genitalibus inclusis. *Antheræ* sessiles, intra faucem supra stigma conniventes, apice barbatae. *Ovarium* conicum, integrum, 4-ovulatum. *Stylus* elongatus, filiformis, deciduus. *Stigma* annulatum apice barbatum. Fructus: *Drupa* exsucca, tetrapyrena, demum quadripartibilis. *Pyrenæ* subtrigonæ, dorso convexæ, monospermæ: dissepimento centrali, ut videtur, nullo.—Herba annua Arkansana, ramosa, tota etiam corolla externe pilis simplicibus incano-hirta; floribus axillaribus solitariis: corollæ limbo plicato convolvulaceo. Nutt. *Euploca convolvulacea*, Nutt. in *Fl. of Arkans. in Ams. Phil. Trans.* v. 5. p. 189.

HAB. Sandy plains of the Arkansas, T. Nuttall, Esq.

A remarkable Boragineous plant, distinguished, as a Genus, by Mr. Nuttall, to whom I am indebted for the specimens here figured. That able botanist remarks that its flowers have an agreeable odour, and open towards sunset as in *Mirabilis*. He contrasts the Genus with *Arguzia*; and Mr. Bentham has pointed out its near affinity with *Schleidenia*, Endl. (*Preslea*, Mart. Nov. Gen. Bras. 2, p. 75, t. 164. The resemblance is very close indeed; but the latter genus has a deeply lobed corolla, with 5 appendages or little hooked scales in the sinuses, and 5 tufts of hairs in the tube, filaments to the stamens, a short persistent style, and a small conical apex to the stigma, instead of a tuft or pencil of hairs.

Fig. 1. Flower. *f. 2.* Corolla. *f. 3.* Lower part of the corolla laid open, showing the stamens and pistil. *f. 4.* Stamen. *f. 5.* Pistil. *f. 6.* Scarcely mature fruit. *f. 7.* Transverse section of the same. *f. 8.* Vertical section:—magnified.





Colensoanæ.

N. O. Cupuliferæ.

TAB. DCLII.

FAGUS MENZIESII. Hook. *fl.*

Ramis brunneis subpubescentibus, ramulis fulvo-tomentosis, foliis breviter petiolatis subrhombeco-cordatis coriaceis rigidis grosse duplicato-crenatis venosis, cupulis pedunculatis solitariis 4-partitis fimbriato-squamosis fimbriis apice incrassatis, carpellis trialatis alis superne falcato-acuminatis stylo persistente longioribus.

HAB. New Zealand; Dusky bay, southern extremity of the group, *A. Menzies*, *Esq.* 1791. Banks of the Lake Waikare, Northern Island, *W. Colenso*, *Esq.*, *T. Bidwill*, *Esq.*—"Taivai" of the natives, according to Mr. Colenso.

Very similar to some of the states of our *F. Cunninghami* of Van Diemen's Land (see Hook. Journ. of Bot. v. 2. p. 152. t. 7.): so much so that we have sometimes been inclined to consider it the same: but besides the improbability of the same species of tree inhabiting islands so very remote from each other, there are characters that appear sufficient to distinguish them. The leaf is here more rhomboidal, and more distinctly veined. The fimbriæ of the cupules are more numerous and arise from a more decided scale; the carpels are broader upwards, and the wings are prolonged much further above the top of carpel, are more acuminate, and have, in the axils of these prolongations, soft spinous processes, a little thickened at the point, which we do not find in the *F. Cunninghami*. We are not acquainted with the male flowers, and indeed we have had only one perfect fruit to examine.

Fig. 1. Fruit bursting open. *f. 2.* *carpel.*



Jamesonianæ.

N. O. Tropeoleæ.

TAB. DCLIII.

TROPÆOLUM TUBEROSUM. R. & P.

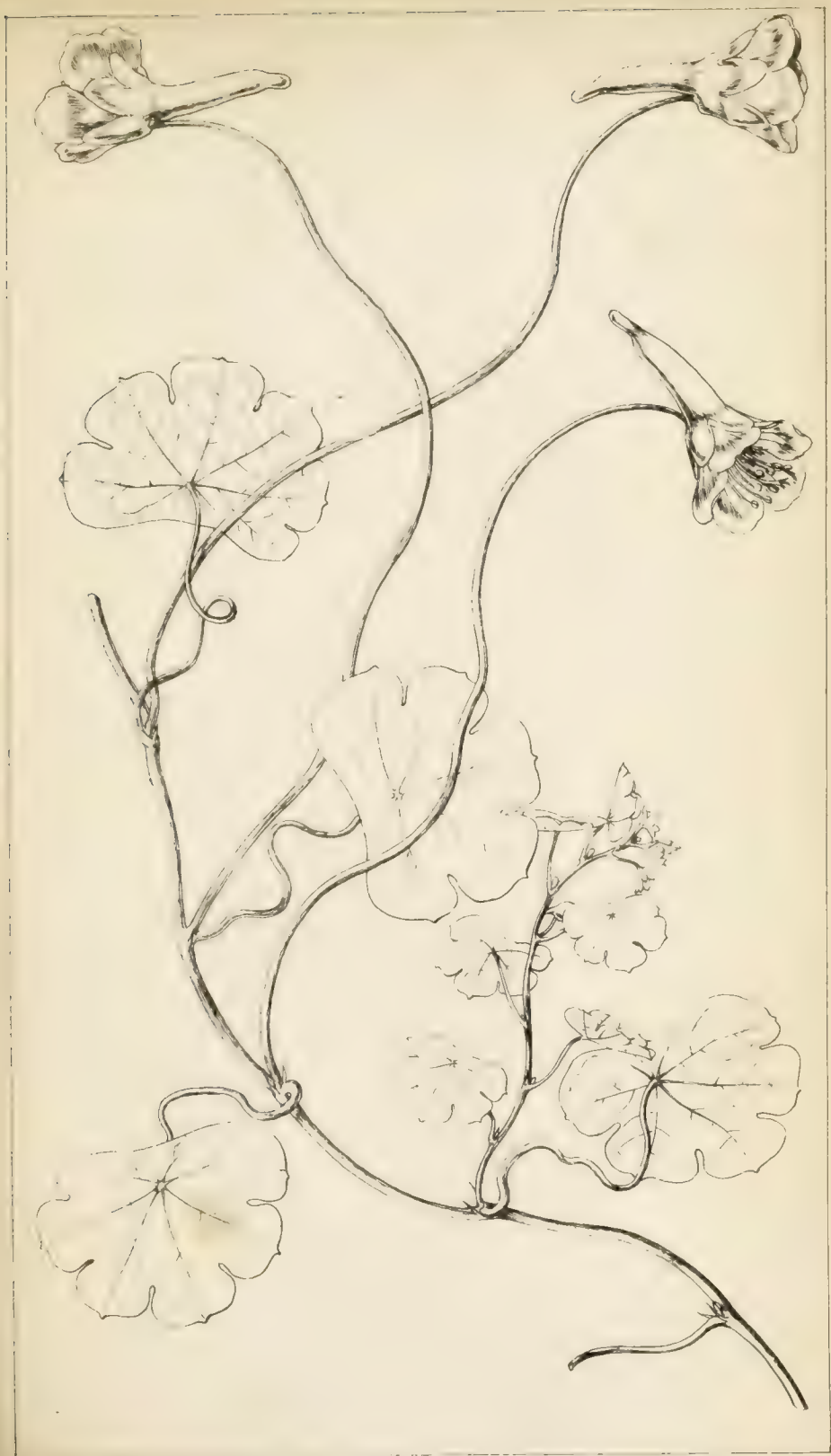
Glaberrimum scandens, petiolis cirrhiiformibus, foliis reniformibus 5-7-lobatis subtus glaucis, lobis latis retuso-truncatis glandula triangulari apiculatis, pedunculis longissimis (subspithamæis), calycis limbo erecto-patente in calcar longum subulato-cylindraceum obtusum apice constictum attenuato, petalis obovato-rotundatis breviter unguiculatis subæqualibus calycem paulo superantibus.

Tropæolum tuberosum. Ruiz. et Pav. *Fl. Per.* 3, p. 77, t. 314, f. 6. Hook. *Bot. Mag.* t. 3714.

HAB. Peru & Columbia, Ruiz & Pavon, Hartweg, Lobb. Ravine near Quito, Dr. W. Jameson.

When the plate of this was prepared I had supposed it to be a new species ; so little has it of the luxuriance of the cultivated plant. I suffer it to pass, however, as being drawn from a native specimen, from Quito, and from a locality where it had not been before known to be indigenous.

Fig. 1. Flower :—magnified.



TAB. DCLIV.

TRADESCANTIA GRACILIS. *H. B. K.*

Caule adscendente simplici vel ramoso, foliis remotiusculis brevi-vaginatibus cordatis acutis vaginisque ciliatis, pedunculis solitariis v. ternis ad unum latus pubescentibus, capitulis (vix umbellis) paucifloris bracteatis, bracteis ovatis peltatis ciliatis, calycis sepalis apice barbatis, antheræ loculis remotis.

Tradescantia gracilis. *H. B. K. Nov. Gen. Am. v. 1. p. 261.*

HAB. Tarqui et Chillo, Quitinian Andes: elev. 8000 feet above the level of the sea, *Humboldt.* Morro of Quito, *Dr. W. Jameson.*

This has delicate white flowers, with deep purple calyx and bractees, and anthers, of which the cells are set very wide apart by a transverse connectivum like the top of the letter T.





TAB. DCLV.

Apodanthes. *Poit. Annal. Sc. Nat.* 3. 421, *t.* 26, *f.* 1.—PILOSTYLES. *Guill. Nouv. Annal. Sc. Nat.* 2. 21, *t.* 1.—FROSTIA. *Bertero Msc. Endl. Gen. Plant.* n. 725.

CHAR. GEN. Flores dioici.—MASC.: *Perigonium* tetraphyllum, foliolis ima basi connatis, æstivatione imbricatis. *Synema* columnare, vertice pileolare, papillosum. *Antheræ* infra verticem sessiles, horizontales, triseriatae, contiguæ, uniloculares, apice apertæ. *Ovarii rudimentum* nullum.—FÆM. *Perigonium* tetraphyllum, foliolis basi ovario adhærens. *Pseudocarpium* subbaccatum, uniloculare, indehiscens, multiovulatum, ovulis ad superficiem parietum pseudocarpii affixis. *Stylus* brevis, conicus. *Stigma* truncatum, sublobatum.—Herbulæ *Americanæ, atro-fusæ*. Flores *minimi bi-tri-lineares, e cortice ramulorum aliorum stirpium prorumpentes; bracteis bi- vel tri-seriatis, seriei interioris interdum valdè connatis, calycem simulantibus*.

1. *Ap. Caseariæ*; bracteis biseriatis, seriei interioris connatis 4-lobatis, lobis obtusissimis, sepalis discretis rotundatis basi subcordatis.

Ap. Caseariæ, Poit. Annal. des Sc. Nat. 3, 422, *t.* 26, *f.* 1.

HAB. In Guiana, on the stems of *Casearia macrophylla*, Vahl.

2. *Ap. Berterii*; bracteis biseriatis, seriei interioris sepalisque basi subconnatis, sepalis oblongis obtusis. (TAB. NOSTR. DCLV. A).

Pilostyles *Berterii, Guill. Nouv. Annal. Sc. Nat.* 2. 21, *t.* 1.

Frostia parasitica, Bertero Msc.

HAB. In Chili, on the stems of an *Adesmia. Bertero. Bridges, n.* 1273.

3. *Ap. Calliandræ*; bracteis 2-3-seriatis, seriei interioris sepalisque basi subconnatis, sepalis ovato-rotundatis. (*Gardn. supra t.* DCXLIV.)

HAB. In the Province of Goyaz, Brazil; on the stems of a species of *Calliandra*.

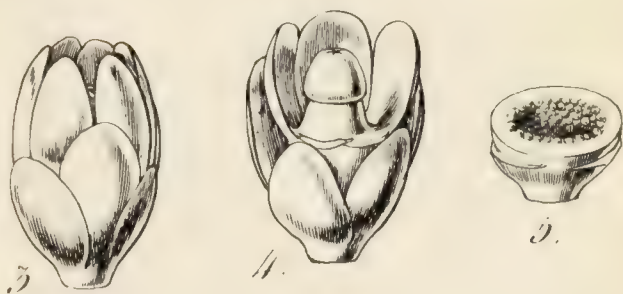
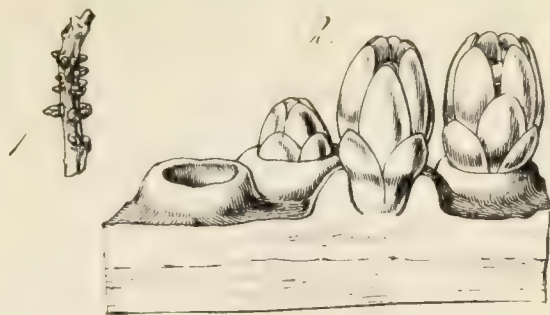
4. *Ap. Blanchetii*; bracteis 2-seriatis ciliatis, seriei interioris sepalisque basi subconnatis, sepalis rotundatis ciliatis. (TAB. NOSTR. DCLV. B).

HAB. Serra de Acurua, Brazil; on the stems of an entire-leaved species of *Bauhinia. Blanchet. n.* 2861.—*G. Gardner.*

TAB. DCLV. A. *Apodanthes Berterii. Fig.* 1. Female plants; *nat. size.* *f.* 2, 3. Plants; *magnified.* *f.* 4. Section of a plant. *f.* 5. Transverse section of the ovary; *more magnified.*

TAB. DCLV. B. *Apodanthes Blanchetii. Fig.* 1. Female plants; *nat. size.* *f.* 2. Single plant. *f.* 3. Section of ditto. *f.* 4. Transverse section of the ovary:—*magnified.*

A.



B.



TAB. DCLVI.

ACROSTICHUM (ELAPHOGLOSSUM) TAMBILLENSE. *Hook.*

Caudice crasso descendente fibrilloso superne copiose squamoso, frondibus cæspitosis subcoriaceis glabris nudiusculis, sterilibus oblongo-ovatis tenui-acuminatis basi obtusis rarius oblique læviter decurrentibus, fertilibus 6-ties minoribus lanceolatis acutis, venis (utrinque) parallelis obsoletis internis, stipite frondes vix superante gracili nudo.

HAB. Sides of ravines, Tambillo, near Quito. *Dr. W. Jameson.*

The caudex of this species resembles a true rhizoma, short, thick, woody, descending, scarcely oblique, clothed with abundant fibres, of which many are 2-4-inches long, branched, black and hairy; the top of the caudex is nearly an inch wide, and clothed with a dense mass of shining, dark brown, subulate scales, from which the stipites spring, several near each other in a cæspitose manner. Sterile fronds 3-4 inches long, with a finely acuminate point, and a very obtuse base. The fertile fronds are many times smaller, lanceolate, acute, rather than acuminate, clothed beneath with pale, yellow brown capsules, the costa, and often a space on each side the costa bare. Seen under a microscope, the stipites sometimes, as well as the fronds beneath, exhibit minute, glandular, brown dots or scales, not visible to the naked eye.



Jamesonianæ.

N. O. Filices.

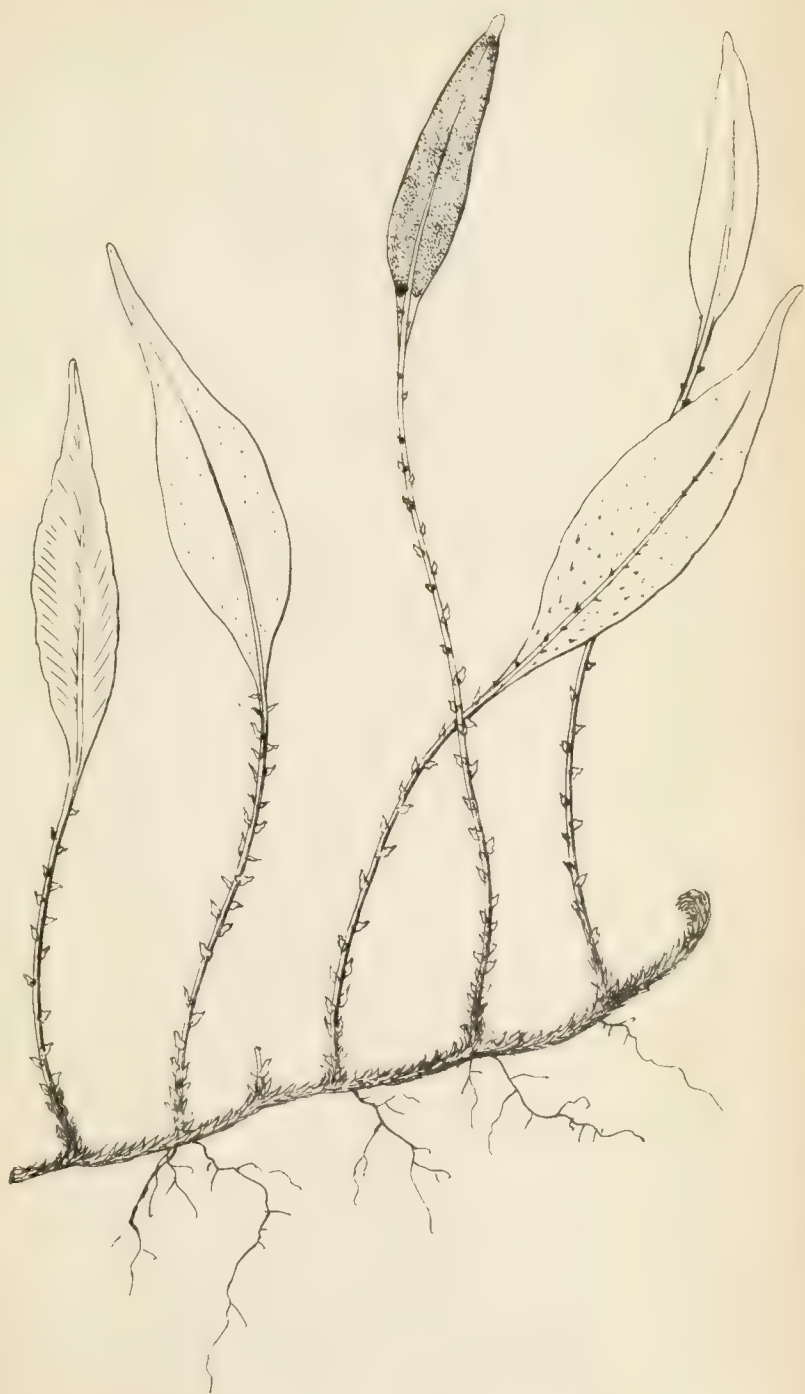
TAB. DCLVII.

ACROSTICHUM (ELAPHOGLOSSUM) LLOENSE. *Hook.*

Caudice repente squamoso, frondibus remotis, sterilibus lanceolatis submembranaceis glabris nudisculis basi in stipitem longiorem parce squamosum decurrentibus apice longe attenuatis margine integris vel obscure crenatis, fertilibus multo minoribus lato-lanceolatis obtusiusculis, venis obliquis parallelis internis obscuris.

HAB. On trunks of trees, Valley of Lloa, El Equador. *Dr. W. Jameson.*

An elegant, but small species, remarkable for its long creeping stipes, and the peculiar shape of the fronds. The veins are more oblique than is usual in *Elaphoglossum*, and the margin is often obscurely lobed, or coarsely crenate. The scales are large, for the size of the plant; on the stipes, and on the frond are a few smaller appressed ones.





TAB. DCLVIII, DCLIX.

CYPRIPEDIUM CAUDATUM. *Lindl.*

Elatum ferrugineo-pubescent 3-4-florum, foliis. . . ? sepalis lanceolato-acuminatis inferioribus omnino connatis, petalis lanceolatis in caudam longissimam fere pedalem attenuatis, labello glabro ore hirsuto, stamine sterili obtuso utrinque ala subtriangulari retusa ascendente apice pilosa, bracteis ad basin pedicellorum latis complicatis obtusissimis glabris.

Cypripedium caudatum. *Lindl. Gen. et Sp. Orchid. p. 531.*

HAB. Interior of Peru, *Ruiz* and *Pavon*, in Herb. Hook., *Mr. Lobb.*

An injured flower is all that was known of this plant when its necessarily imperfect character was drawn up by Dr. Lindley; and that flower was derived from an Herbarium left by Ruiz and Pavon in Peru, and preserved in my collection. Mr. Lobb while collecting for Mr. Veitch of Exeter, in the Andes, east of Lima, in the far interior, had the good fortune to meet with it, and sent home dried specimens, and brought living roots of it with him as far as Jamaica; but they perished while he was there confined with a malignant fever. From one of the two above-mentioned specimens, for which I am indebted to Mr. Veitch, the accompanying figure was made; but here again I have to regret the absence of foliage, so that I cannot be sure it has a scape like the species of Northern India, or, as is most likely, a leafy stem like our European and the North American and other Mexican species. In the latter case, the species must be a very stately one, for the upper portion, without the trace of a leaf is more than a foot long, everywhere clothed with a compact ferruginous down except on the bractæas, the lip, and the inside of the petals and sepals. The lower of the bractæas is $2\frac{1}{2}$ inches long, striated, broadly oval, very obtuse, folded double so as to embrace the pedicel and the main stalk; the upper ones are gradually smaller. There are 3 flowers, and a trace of a fourth, larger than those of any known species, the structure of which will be better seen by the figure than any description in words.



TAB. DCLX.

. APTERIA SETACEA. Nutt.

Caule gracili ramoso, foliis paucis squamiformibus acutis erecto-patentibus, perianthio urceolato-tubuloso, laciniis exterioribus 3 late ovatis obtusiusculis, interioribus 3 ligulatis obtusissimis.

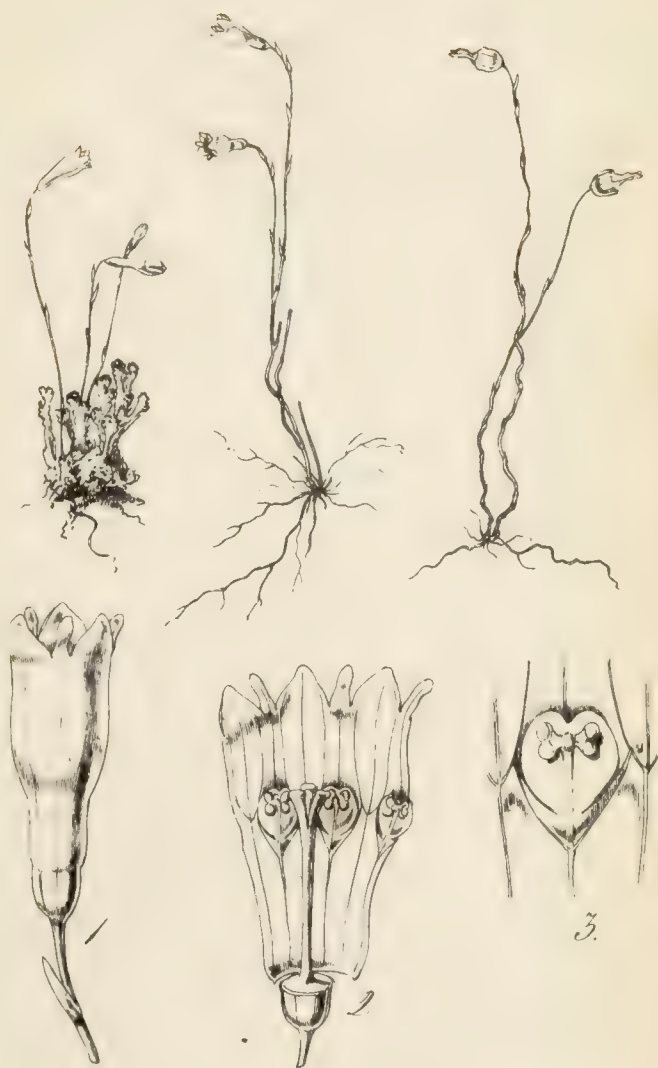
Apteria setacea. Nutt. *Journ. Acad. N. Sc. Philad.* 7, p. 64, t. 9, f. 1. Miers, in *Linn. Trans.* v. 18, p. 546.

β. *major*; triplo quadruplo major, subsexflora. *A. setacea*, Benth. *Pl. Hartw.* p. 67, n. 495.

HAB. Florida, Nuttall. Savannas, interior of Manchester County, Jamaica, Mr. Purdie.—β. Among decayed leaves, near Teotolcingo, in the mountains of Chinantla, Mexico. Hartweg.

I must confess that while preparing the analysis of this species, I did not at first recognize it as the original *Apteria* of Nuttall; but after a most careful comparison with that author's original specimens, I am satisfied of its identity. Its structure confirms the correctness of Mr. Miers's figure of a second species of this genus, *A. lilacina*, Miers, in a most admirable and profound paper on a new group of *Burmanniaceæ*, published by that gentleman in the 18th vol. of the Transactions of the Linnæan Society; and I am glad to have this opportunity afforded me to acknowledge my error, so ably pointed out by Mr. Miers, in uniting his genus *Dictyostegia* with *Apteria*, (in this Work, TAB. CCLIV.) which I should never have done, had I then understood the structure of *Apteria*. *A. lilacina*, of Mr. Miers, found in Brazil, is assuredly very nearly allied to the present species, which has a pretty extensive range; but it is well distinguished by Mr. Miers, in the sharp but acuminate segments of the perianth; the flower too is much larger; it droops in both species. *A. setacea* varies considerably in size. Our original specimen from Mr. Nuttall, and those from Jamaica, are from 2-4 inches high; but Mr. Hartweg's Mexican ones are 8-10 inches high, and bear as many as 6 flowers upon a stem; and they are thrice as large as in the usual state of the plant, but different in no other respect.

Fig. 1. Flower. *f. 2.* The same, with the perianth laid open, showing the style and stigmas, and the 3 hollow sacs in which the curious stamens are lodged. *f. 3.* Sac and stamen:—*more or less magnified.*





Jamesoniana.

N. O. Oxalideæ.

TAB. DCLXI.

OXALIS LOTOIDES. *H. B. K.*

Caule procumbente elongato, ramis pilosis, foliis ternatis, foliolis obcordatis emarginatis molliter appresso-pilosis margine villosis subtus glaucis, petiolis folio longioribus pilosis, stipulis adnatis majusculis fuscis, pedunculis subterminalibus elongatis 3-7 floris pedicellisque elongatis pilosis, sepalis oblongis obtusis membranaceis glabriusculis eglandulosis corolla aurantiaca duplo brevioribus, stylis stamina multo superantibus.

Oxalis lotoides. *H. B. K. Nov. Gen. Am. 5, p. 421.*

HAB. Quindiu, elev. of 7200 feet, *Humboldt*. Andes of Quito, *Dr. W. Jameson*.

Whole plant with a good deal the habit of *Lotus*. Stems long and decumbent. Leaves singularly glaucous beneath. Flowers orange yellow with dark streaks.



TAB. DCLXII.

THAMNOCARPUS. *Harv.*

GEN. CHAR. *Frons* teres, ramosa, intus diaphragmatibus divisa, carnosa; caro interna e fibris articulatis, longitudinalibus, implexis, externa e cellulis minutis composita. *Sphærospora* in stichidiis floccosis, ramosissimis, articulatis, penicillatim e frondis glandulis superficialiis ortis, nucleo triangulatim quadripartito.

T. Gunnianus. *Harv.*

HAB. Port Arthur. Van Diemen's Land. *Ronald Gunn, Esq.*

*Fron*d 3-4 inches high, nearly half a line in diameter, much and very irregularly branched; *stem* generally simple, and rather naked below, above frequently divided into several principal branches, which are densely set in an alternate or more generally secund manner with others which are shorter, but in other respects similar, and these again are once or twice divided and furnished with short ramuli; all the branches and lesser divisions erect, or erecto-patent, with acute axils; apices acute, but frequently broken off, and appearing truncate. Sometimes the frond is excessively branched and bushy, with tufts of ramuli issuing from the broken tips of old branches. *Substance* cartilaginous when moist, horny when dry. *Colour* a fine, clear, red, discharged in fresh water. *Structure*; the *axis* is hollow, but divided into a series of cells by transverse cellular diaphragms; the flesh of the periphery very thick, its outer surface composed of minute cellules irregularly packed together, its inner substance formed of interwoven, longitudinal, jointed fibres. The *fructification* consists of *sphærospores* (or *tri-sporous capsules*) exactly similar to those of *Callithamnion*, borne on little pencils of much branched, confervoid, articulated filaments, which issue from glands scattered on the surface of the branches and ramuli; each pencil about a line long, divided into 3 or 4 principal branches, which are clothed with pinnate ramuli (or plumules) and produce an abundance of *sphærospores* on the ultimate divisions.—A very distinct genus, and quite worthy of New Holland, the land of puzzles, presenting as it does a frond outwardly resembling *Gigartina plicata* or *Griffithsia*, with a fructification which is in itself a perfect miniature *Callithamnion* (!), thus offering a new instance of the justice of Agardh's remark, that "the lower algæ are the organs of the higher." The only other genus of *Florideæ* with an analogous fructification is *Heterocladia* of Decaisne, with which our plant will form a well-characterized sub-family, called indeed by that Author HETEROCLADIEÆ, and which may almost be regarded as the analogue among *Florideæ* of *Sporochnoideæ*.—W. H. H.

Fig. 1. *Thamnocarpus Gunnianus*; nat. size. f. 2. Apex of a branch in fruit; magnified. f. 3. Pencil of fructification; highly magnified. f. 4. Ramulus of the pencil, with sphærospores; highly magnified. f. 5. Longitudinal section of stem; magnified.



TAB. DCLXIII.

LOASA RUPESTRIS. *Gardn.*

Hispida, caule erecto infra inflorescentiam simplici supra paniculato-racemoso, foliis alternis petiolatis ovato-oblongis sinuato-lobatis grosse dentatis basi cordatis, racemis pedicellisque elongatis, lobis calycis late ovatis acutis, petalis obovatis obtusis concavis, capsula ovata.

Loasa rupestris. Gardn. Herb. Bras. n. 2413.

Causancao, nom. vulg.

HAB. Rare, in dry rocky places between Cachoeiras and Mar-
maleiro, near the Western boundary of the Province of
Brazil; February, 1839.

Herbacea, hispida, 2-3 pedalis. Caulis erectus, infra foliosus, supra paniculato-racemosus, aphyllus. Folia alterna, petiolata, ovato-oblonga, obtusa, sinuato-lobata, grosse dentata, basi cordata, 4-4½ poll. longa, 2-2½ poll. lata: petioli 1½-2½ pollicares. Panicula racemosa. Flores parvi, albi, pedicellati. Pedicelli 8 lin. circiter longi. Calycis tubus ovario adhærens, limbus persistens 5-partitus æqualis, segmentis late ovatis acutis petalis brevioribus. Petala obovata, obtusa, concava. Squamæ 5, petalis alternæ, ovatæ, concavæ, trinerves, dorso trisetæ, truncatæ, in conum conniventes et basi intus filamentis 2 sterilibus instructæ. Stamina plurima, cum petalis inserta, exteriora 10, sterilia, lineari-lanceolata, ciliata, 1-nervia; interiora fertilia in phalanges 5-18-andras petalis oppositas disposita. Antheræ erectæ, subrotundæ, biloculares. Stylus simplex. Stigma trifida. Capsula ovata, hispida, calycis limbo coronata, unilocularis, vertice breviter exserto, trivalvis, valvis cum nervis placentiferis, tandem liberis, alternantibus. Semina plurima, obovata, compressa, echinata.

This plant is readily distinguished from all the hitherto described species of *Loasa* by its elongated panicle, which consists of about 5 branches, each forming a raceme of from 10-14 flowers.—*G. Gardner.*

Fig. 1. Flower. *f. 2.* Scales from the flower, with the sterile stamens:—*magnified.*



TAB. DCLXIV.

TOVARIA PENDULA. *R.* & *P.*

GEN. CHAR. *Cal.* 8-sepalus, sepalis lineari-lanceolatis patentibus, persistentibus. *Petala* 8, disco elevato carnosio inserta lineari-oblonga. *Stam.* 8, disco elevato carnosio inserta, erecto-patentia. *Filamenta* subulata. *Antheræ* ovato-sagittatæ antice pilosulæ, longitudinaliter ad marginem dehiscentes. *Ovarium* ovatum, disco carnosio parvo impositum, 6-loculare, multiovulatum; *ovulis* minutis dissepimenta tota tegentibus. *Stylus* brevissimus, crassus. *Stigma* dilatatum, 6-lobum, lobis recurvis, glandulosis. *Bacca* (vix matura) globosa, stigmate 6-lobo coronata, 6-locularis, polysperma. *Semina* parva, reniformia, exalbuminosa? *Embryo* curvatus.—Herba Americæ Meridionalis, *ramosa, glabra*. Folia *alterna, trifoliolata*; foliolis *petiolulatis, lanceolatis, anguste acuminatis, penninerviis, integerrimis*. Racemi *elongati, terminales, bracteati*. Flores *majusculi, albi*. *Bacca magnitudine Pruni avium*. *Odor totius plantæ Apii graveolentis*.

Tovaria pendula. Ruiz et Pav. *Fl. Peruv.* p. 73, p. 306. Don in *Ed. New Phil. Journ.* 1828.

Bancroftia diffusa. Macfad. *Fl. Jam.* p. 112.

HAB. Woods between Chinchao and Pati, Peru; Ruiz and Pavon. Jamaica, Moore's Gap, St. George's; Dr. Macfadyen, Purdie. Caraccas, Linden, n. 244.

My first knowledge of this plant was from specimens sent by our Collector for the Royal Gardens, Mr. Purdie, from St. George's, Jamaica, where Dr. Macfadyen gathered it some years previously; and having no means of comparing it with Ruiz and Pavon's little-known Peruvian plant, *Tovaria*, and not finding it to agree with any described genus in books which were accessible to him, that gentleman constituted of it a new genus, which he dedicated to Dr. Bancroft, and detailed its characters very carefully. I have since again received the same plant from the Caraccas.

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Front, and *f.* 4. Back view of a stamen. *f.* 5. Flowers, with the petals and stamens removed. *f.* 6. Section of ovary. *f.* 7. Scarcely mature leaves. *f.* 8. Transverse section of ditto; *nat. size*. *f.* 9. Seed. *f.* 10. Section of the same. *f.* 11. Embryo:—all more or less magnified.





Jamesonianæ.

N. O. Commelineæ.

TAB. DCLXV.

TRADESCANTIA HIRSUTA. *H. B. K.*

Caule ascendente ramoso glabro, foliis oblongo-lanceolatis acuminatis subundulatis subtus præcipue vaginisque hirsutis laxis margine serrulato-scabris, pedunculis solitariis v. geminis plerumque bifloris, floribus brevissime pedicellatis bracteatis, sepalis glanduloso-hirsutis petalis (purpureis) duplo minoribus, antheræ loculis approximatis.

Tradescantia hirsuta. H. B. K. Nov. Gen. Am. v. 1. p. 263.

HAB. Mountains of New Grenada, about 6000-7300 feet, *Humboldt*. Pichincha, El Equador, 9000 feet, *Dr. W. Jameson*.

Sent by my valued friend, Dr. Jameson, under the above name; and it appears quite to agree with the character and description of Humboldt. It has an extensive range in South America. The flowers are large for the size of the plant, and the petals a very bright purple, which colour is retained in drying. The anther-cells are approximate, white; the filaments purple, with copious long white hairs at the base.





TAB. DCLXVI.

TRICHANTHA MINOR. Hook.

GEN. CHAR. *Calyx* semia-inferus? profunde 5-partitus, segmentis in lacinias 3-5 anguste lineares longissimas profunde fassis, longe ciliatis. *Corolla* tubulosa, curvata, hinc subventricosa, crinito-hirsuta, supra basin constricta, limbo 5-lobo, extus 5-appendiculatis, appendiculis lineari-clavatis patentibus, cum lobis alternantibus; *lobis* rotundatis patentibus, 2 superioribus paulo minoribus magisque approximatis. *Stamina* 4, didynamia: *Antheræ* per paria connexæ. *Fructus*—?—Frutices scandentes Caracasani, radicales, et, ut videtur, epiphyti, pilosi. Folia succulenta, carnosa, ovata, seu obovata, penninervia, opposita, unico minimo. Flores hirsutissimi, axillares, aggregati. Pedunculi uniflori.

Trichantha minor; foliis ovatis acuminatis integerrimis ciliatis supra glabriusculis subtus hirsutis, corollæ tubo tereti, caule adpresse piloso.

HAB. Columbia, S. America. Mr. W. Lobb.

I know of no Genus to which this can be assimilated; and, though ignorant of the nature of its fruit, and, from the paucity of flowers, unwilling to destroy them for analysis, I venture to constitute of this and the following plant a new genus, which I have named from the copious and long hairs with which every part of the flower is covered.

Fig. 1. Hair, magnified.



Lobbianæ.

N. O. Gesneriaceæ.

TAB. DCLXVII.

TRICHANTHA MAJOR. *Hook.*

Foliis obovatis acuminatis ciliatis utrinque hirsutis dentato-serratis, corollæ tubo subangulato, caule patenti-piloso.

HAB. Columbia, S. America. *Mr. W. Lobb.*

A very distinct species from the preceding, with much larger leaves, broader upwards, dentato almost spinuloso-serrate, hairy on both sides, with an angular tube to the corolla, and patent hairs on the stem. The general habit of the two plants is precisely similar, the same texture of leaf, the same deeply cut segments of the calyx, and the club-shaped appendages alternating with the segments of the limb of the corolla. In both, the hairs are beautifully jointed, when seen under a microscope.

Fig. 1. One of the hairs; *magnified.*



TAB. DCLXVIII.

CRYPTOMERIA JAPONICA. Don.

GEN. CHAR. *Amenta* mascula spicata: *Squamæ* antheriferæ, rotundatæ, appresse imbricatæ, sessiles. *Antherarum thecæ* 5, connatæ! basi squamarum omnino adnatæ, antice foramine amplo dehiscentes. *Ovula* erecta. *Strobili* solitarii, globosi, squarrosi: *squamis* e pericarpio 3-6-dentato bracteaque lanceolata acuminata inferne concretis compositis. *Semina* 4 v. 6, compresso-angulata, vix alata.

Arbor Japonica (et Chinensis) *procera, sempervirens*. Folia fere omnino Araucariæ Cunninghamii, 5-fariam ordinata, subulata, viridia, verticaliter compressa, vix pollicaria. *Amenta mascula in spicam terminalem aggregata; fæminea solitaria globosa*. Don.

Cryptomeria Japonica. Don, in *Linn. Trans.* v. 18. p. 167. t. 13, f. 1.

Cupressus Japonica. *Linn. Fil. Suppl.* p. 421. *Thunb. Jap.* p. 265.

San, vulgo Sangi. *Kæmpf. Amæn.* p. 883.

HAB. Island of Nipon, and mountains about Nangasaki, Japan. *Kæmpfer, Thunberg*. China (probably Macao), *Chas. Millett, Esq.*; Chusan, *Capt. Sir Everard Home*, R. N.

My first knowledge of this plant was from a fine specimen, but without flower or fruit, sent to me by Mr. Millett from Macao. More recently I have received specimens, with cones, from Sir Everard Home, gathered at Chusan, and it is from them that the present figure is made. I do not, however, possess any male catkins; and my female ones, at any rate seed-bearing scales, differ considerably from those represented by Mr. David Don: they have a prominent keel on the under side, and I find but two seeds attached to each; and so similar is the general nature of their strobili to those of *Taxodium*, that I should be almost inclined to place the tree in that genus. The species is unquestionably the same as Mr. Don's, and has probably an extensive range. The leaves are distinctly seen to be 4-angled, with a groove or furrow between the angles, and the base of the lower angle is singularly decurrent upon the branches.

Fig. 1. Portion of a branch with leaves. *f. 2.* Scale from a strobilus seen from the back. *f. 3.* Side view of ditto with one seed. *f. 4.* Under side of scale. *f. 5.* seed:—*magnified*.



TAB. DCLXIX.

HEMITELIA IMRAYANA. *Hook.*

Inermis? frondibus bipinnatis glabris, pinnulis amplis late oblongo-lanceolatis acuminatis profunde pinnatifidis fere ad rachin, segmentis lanceolatis acuminatis serratis, soris uniseriatis prope marginem fere ad rachin attingentibus, venis pinnatis, venulis 2-3, infimis sæpe anastomosantibus.

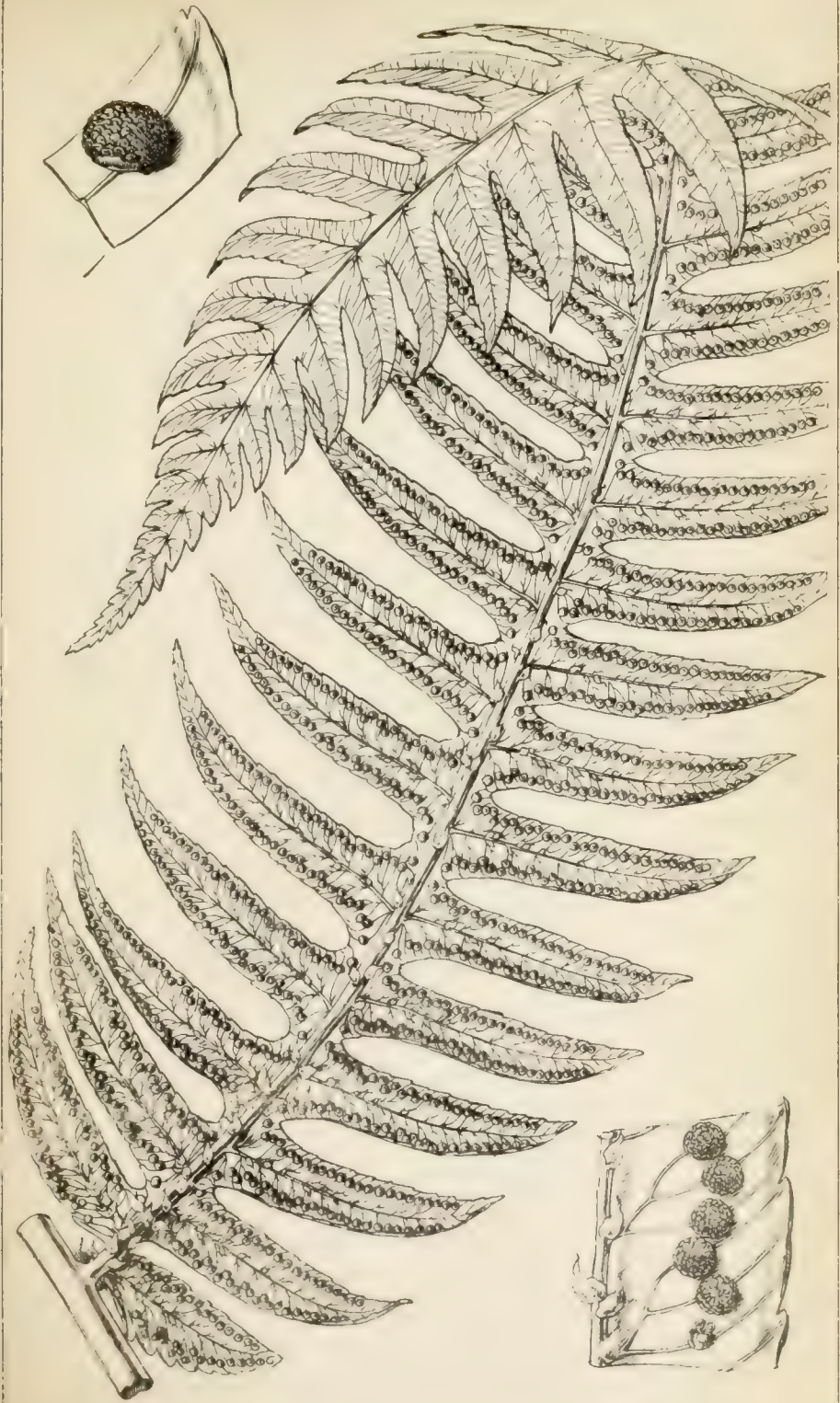
Hemitelia Imrayana. *Hook. Sp. Fil.* 1, p. 33.

β. segmentis grosse serratis, *Hook. l. c. p.* 34. *H. serrata*, *J. Sm. in Hook. Lond. Journ. of Botany*, v. 1, p. 662 (name only)

HAB. Dominica, *Dr. Imray*, 1839.—β. Jamaica? *Wiles?* (*Herb. J. Smith*).

At first sight this has a good deal the appearance of *H. horrida*; but the pinnæ are far narrower, smaller, 10-12 inches long, apparently always glabrous, the segments serrated, the veins much less copiously branched. The *H. serrata* of *J. Sm.* (doubtful as to country) may I think be safely referred to this species.

Fig. 1. Pinna; *nat. size.* *f. 2.* Portions of a segment; *magnified.* *f. 3.* Sorus:—more *magnified.*



TAB. DCLXX.

ANEMONE JAMESONI. *Hook.*

Subsericeo-hirsuta, radice repente, foliis omnibus radicalibus longissime petiolatis triternatim sectis, segmentis primariis longi-secundariisque brevi-petiolulatis ultimis cuneatis bi-trifidis lobis acutis, involucri foliolis petiolatis triternatim sectis, segmentis oblongis obtusiusculis superne latioribus, pedicellis binis, sepalis 5 ovalibus obtusis extus medio piloso-sericeis, capitulo globoso glabro, carpellis ovatis stylo subulato apice uncinato terminatis.

HAB. Hitherto found only on the mountain of Pillzum, Andes of El Equador, at an elevation of 12,000 feet above the level of the sea, *Prof. W. Jameson* (n. 86).

A new and very distinct species of *Anemone*, most allied perhaps to *A. triternata*; but differing from it in its much larger size, a span and more high, its petiolated involucral leaves, the few (five, not 10-12) sepals, their figure, and the short, globose, glabrous head of carpels, each tipped with a hooked, subulate style.

Fig. 1. Head of carpels; *nat. size.* *f. 2.* The same; *magnified.* *f. 3.* Single carpel:—more *magnified.*



TAB. DCLXXI.

ALSOPHILA CRINITA. *Hook.*

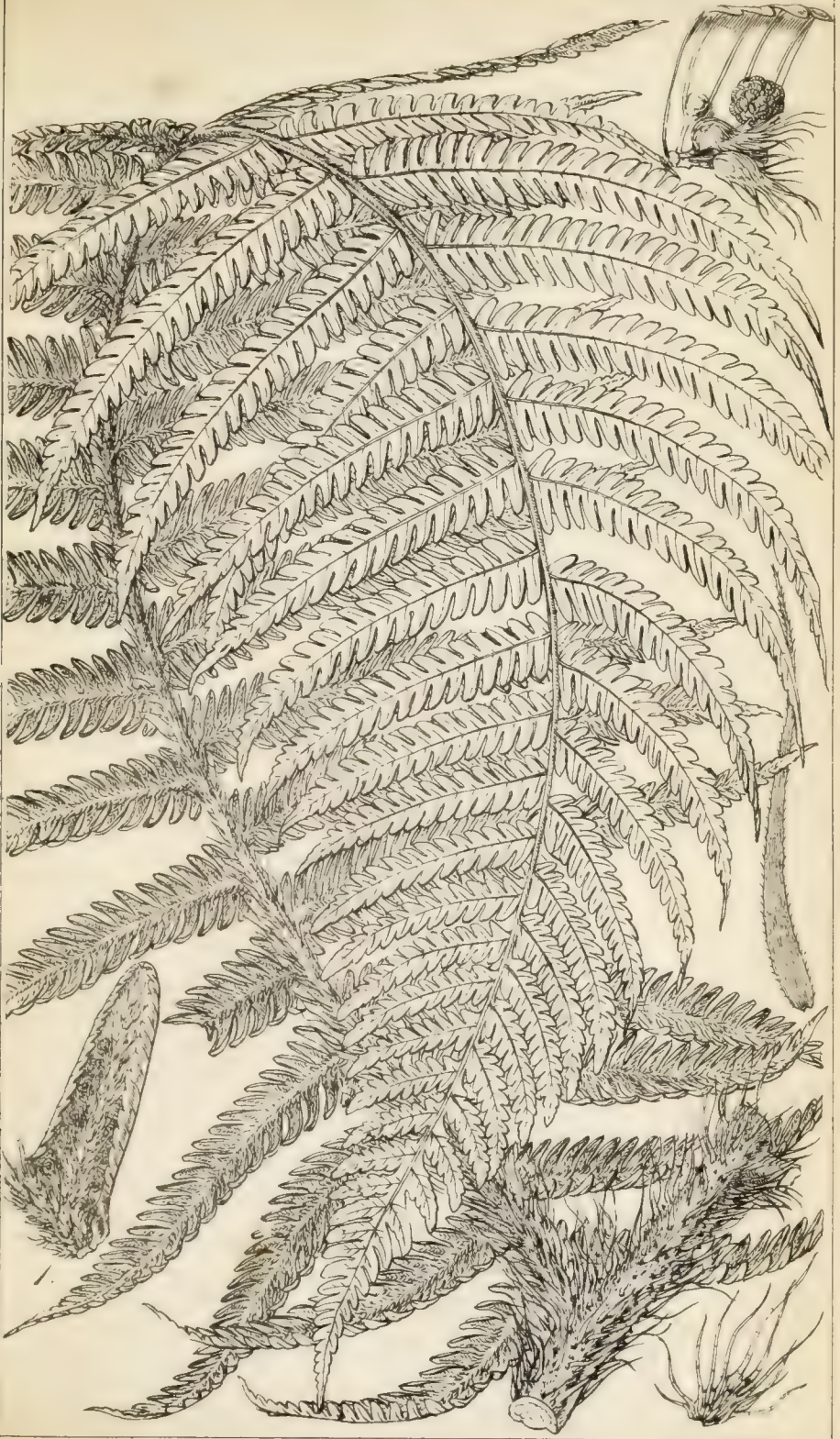
Stipite rachique primaria pallidis elevato-punctatis muricatisque, frondibus bipinnatis coriaceis, rachi supra pilosa subtus costaque dense paleaceo-crinitis, paleis nunc brevibus minutis plerumque elongatis appressis, pinnulis sessilibus anguste lanceolatis acuminatis profunde fere ad rachin pinnatifidis, segmentis anguste ovato-oblongis subobtusis paululum falcatis margine (sicco) valde recurvis subtus pallidioribus, costa venisque sæpe pilosis, venis furcatis, soris paginas inferiores fere totas occupantibus paleis crinitis tectis.

Alsophila crinita. *Hook. Sp. Fil.* 1, p. 54.

HAB. Ceylon. *Mrs. Gen. Walker.*

A very remarkable species, not like any with which I am acquainted. It possesses the dark, minute tuberculations on a pale stipes and main rachis, remarked by me in *Cyathea medullaris*. The main rachis, too, and the rachis of the pinnæ, although stout, are waved and flexuose; and they are beneath quite shaggy with copious, pale-coloured scales; these are of two kinds, at least upon the main rachis, some being exceedingly small, but the majority are long, slender, subulate, more or less appressed, gradually smaller on the costæ, where they partially cover and conceal the copious fructifications.

Fig. 1. Under side of a fertile segment. *f. 2.* Sorus and scales. *f. 3.* Single scale:—*magnified.*



TAB. DCLXXII.

BERBERIS DARWINII. *Hook.*

Ramis junioribus rufo-pubescentibus, spinis brevibus palmato-partitis, foliis rigide coriaceis nitidis discoloribus cuneatis apice trifidis margine paucidentatis dentibus lobisque spinulosis, racemis folio longioribus, pedicellis flores duplo superantibus gracilibus, baccis (una cum stylo persistente) lageniformibus.

HAB. Chiloe, *C. Darwin, Esq.* Valdivia and Osorno, *Bridges, n. 582, 585.*

There is no difficulty in characterizing this well-marked species. The leaves are very constant to their form, sessile, but tapering more or less at their base, very rigid, glossy, especially above, pale and often rusty-coloured beneath. Peduncles twice or thrice the length of the leaves, reddish, as are the long slender pedicels, each of which has an ovate, concave scale or bractea at the base. Berries, probably not quite mature, almost black, with a glaucous tinge, shaped like a flask, the style and stigma representing the neck and head of the flask.

Fig. 1. Flower. *f. 2.* Back view of ditto. *f. 3.* Petal and stamen. *f. 4.* Pistil :—*magnified.*



TAB. DCLXXIII.

FAGUS CLIFFORTIODES. *Hook. fil.*

Ramis nigro-fuscescentibus, ramulis pubescentibus foliosis, foliis ubique subdistichis breviter petiolatis parvis ovatis acutis margine planis integerrimis, inferne pubescenti-tomentosis, floribus ♂ aggregatis brevi-pedunculatis.

Cliffortioides oblongata. *Banks and Sol. mss. in Herb. Banks.*

HAB. Dusky Bay, New Zealand, *Mr. Menzies.*

Similar though this is in many respects to our *F. Solandri* (TAB. NOSTR. DCXXXIX.) it is yet quite distinct, and apparently wholly confined to Dusky Bay, at the southern extremity of the middle island of New Zealand, where it was detected by Mr. Menzies. The leaves are truly ovate and acute, always drying of a brown colour on the upper side; the perianth 5-cleft, with rather acute segments. We regret that the fruit is unknown to us of both the species. Small as are the leaves of all the Beeches of the southern hemisphere, these two species have the smallest of all, looking not much unlike those of some *Vaccinium*.

Fig. 1. Leaf, upper side. *f. 2.* Under side of ditto. *f. 3.* Male flower :—*magnified.*



TAB. DCLXXIV.

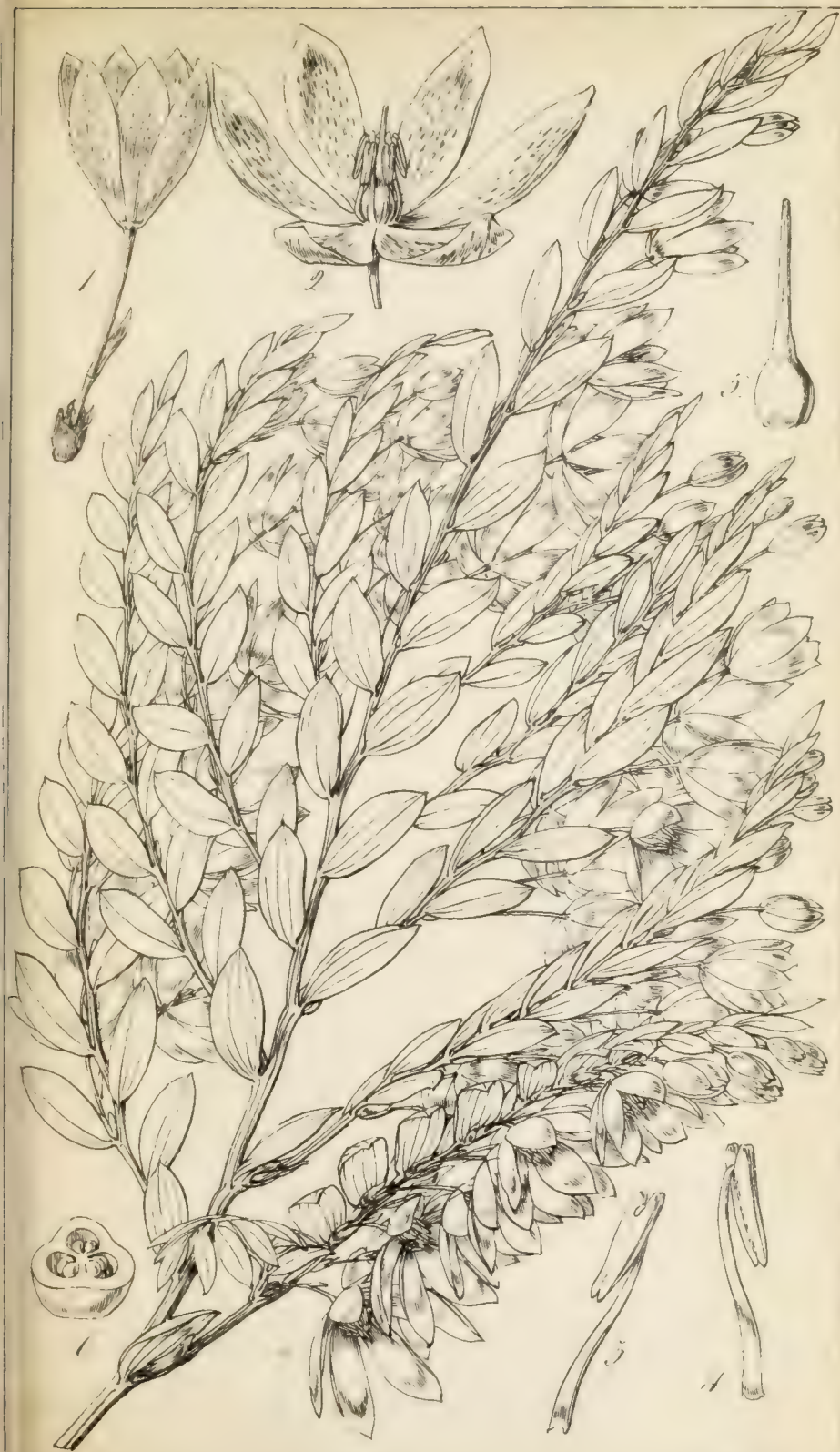
CALLIXENE POLYPHYLLA. Hook.

Elata valde ramosa, foliis copiosis oblongis subovatisve mucronulatis 5-7 nerviis transversimque (sub lente) venosis subtus glaucis, pedunculis folium fere æquantibus seu eo longioribus infra medium articulatis unibracteatis, petalis acutis maculatis, antheris incumbentibus.

HAB. S. Chili. Trunks of trees near Valdivia, where it is called "Asajur," Bridges, *n.* 679. Cape Tres Montes, *C. Darwin, Esq. n.* 531-8. Isle of Huaffo, *Dr. Eights.*

Our larger specimens of this *Callixene* indicate a truly beautiful plant; they are a foot and a half long (and yet only a portion of the entire plant) with copious foliage, numerous large and probably fragrant flowers, white, it would appear, spotted with orange. It is extremely different from the old *C. marginata* of the Falkland Islands and Cape Horn, and equally so from that of New Zealand, *C. parviflora*, of this Work, TAB. DCXXXII. Besides the greater size, copious ramifications and leaves, these latter are glaucous beneath, and quite destitute of the silvery lines so conspicuous in the other species, especially in *C. marginata*; the flowers are larger, the peduncles longer, the petals elegantly spotted. In the size and spotting of the flowers, this plant exhibits a still nearer affinity with the *Luzuriaga radicans*, R. and P.; a genus scarcely distinct from the present, except in the anthers being fixed to the apex of the short filament by their base, and not versatile, and in the peduncles being 3-flowered. All the species of the genus have distichous leaves, and Dr. Hooker found them growing frequently at the roots of the trees in Tierra del Fuego, lying flat upon the trunk. The present, from Mr. Bridges' remark, would appear to be an epiphyte.

Fig. 1. Flower. *f. 2.* Ditto, more expanded. *f. 3, 4.* Stamens. *f. 5.* Pistil. *f. 6.* Section of the ovary:—*magnified.*



TABS. DCLXXV, DCLXXVI.

HYPODERRIS BROWNII, J. Sm.

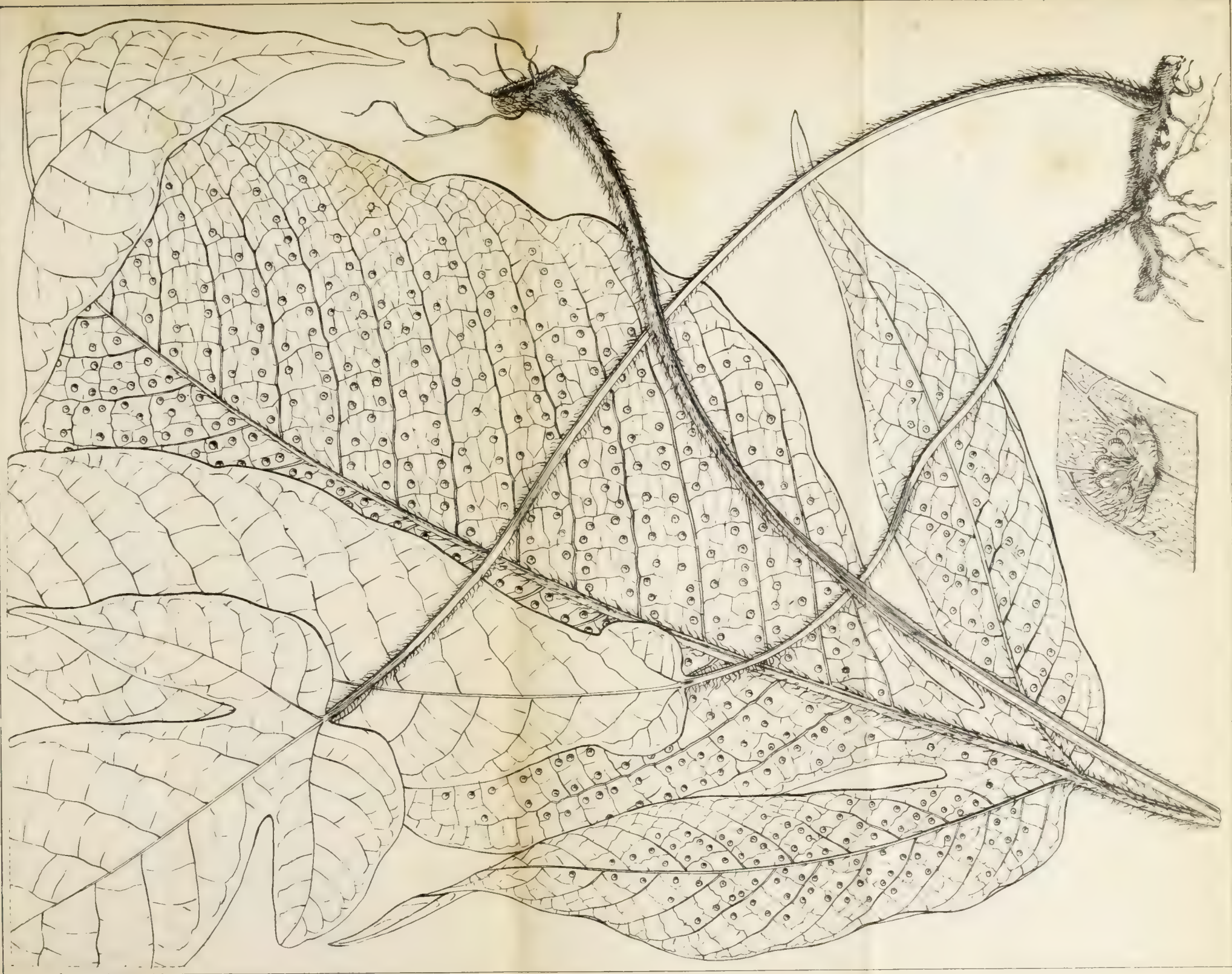
Hypoderris Brownii. J. Sm. in Hook. Gen. Fil. Tab. 1. Hook. Sp. Fil. 1, p. 57.

HAB. St. Anne's Valley, Trinidad, Mr. Lockhart.

Caudex repens, setaceo-squamosus, crassitie pennæ anserinæ. *Stipes* spithamæus et ultra, setosus. *Frons* spithamæa ad pedalem, ovato-lanceolata, membranacea, supra basin contracta, sæpius profunde triloba basi cordata, lobis lateralibus multoties minoribus, lanceolatis, acuminatis; lobo medio, seu terminali, maximo, ovato-acuminato, subsinuato, ubique integerrimo. *Costa* valida. *Venæ* parallelæ, patentes, sinuosæ; venulis reticulatis connexis, ultimis nonnunquam liberis. *Sori* globosi, venis primariis paralleli, ad angulas confluentes inserti. *Involucrum* inferum, subcylindricum, membranaceum, reticulatum, margine patente fimbriato, subciliato.

The essential character of this genus, established by Mr. Brown, consists in the inferior involucre, like that of some *Woodsia*, but arising from anastomosing veins, as in the *Phymatodes* group of *Polypodium*, and in the true *Aspidium* of Presl. This fine plant appears to be quite peculiar to Trinidad, and I have seen no specimens save from Mr. Lockhart.

Fig. 1. Small portion of the frond with a sorus:—magnified.



TAB. DCLXXVII.

RANUNCULUS STENOPETALUS, *Hook.*

Humilis dense cæspitosus glaberrimus, foliis omnibus radicalibus longe petiolatis cordatis ternatim sectis, lobis foliolisve lateralibus ovatis integris vel inæqualiter bifidis, intermedio obovato-cuneato integerrimo v. tridentato dentibus segmentisque obtusis, scapo folio brevioribus, sepalis 5 rotundato-ellipticis concavis, petalis 5 lineari-lanceolatis prope medium nectariferis.

HAB. Shores of the Bay of Valdivia, S. Chili, growing within tide-mark, *Bridges, n. 11.*

This has a considerable resemblance to *R. biternatus* of the Falkland Islands and Tierra del Fuego. figured at our TAB. CDXCVII, especially in size and general aspect; but in that the leaves are more compound, with their lobes or leaflets distinctly petiolulate, and the petals are 6-8. It approaches still nearer to *R. acaulis*, Banks and Sol., and Hook. fil. Fl. Antaret. Tab. 2, from New Zealand and Lord Auckland's Islands, especially in the form of the leaves; but that species has creeping or stoloniferous, filiform stems, spathulate petals, and a nectary placed above the middle of the petal.

Fig. 1. Leaf. *f. 2.* Flower. *f. 3.* Outside view of a flower, showing the calyx. *f. 4.* Petals;—*magnified.*





TAB. DCLXXVIII.

DIOSCOREA PUSILLA, Hook.

Nana herbacea, tubere subrotundo undique fibroso, ramis patentibus diffusis, foliis petiolatis cordatis retusis mucronatis 7-9-nerviis, pedunculis axillaribus, masc. 3-5-floris, fœm. subunifloris vix folium superantibus, flore fœmineo basi bibracteato.

HAB. About Valparaiso, *Bridges*, n. 166. *Cuming*, n. 686. (or 886?)

Radix: tuber subrotundum, copiose fibrosum. Caulis debilis, subpalmaris, filiformis, ramosus; ramis diffusis, vix scandentibus, flexuosis. Folia alterna, petiolata, subrotundo-cordata. Pedunculi axillares, solitarii; *masc.* 2-5-flori, pedicellis elongatis gracillimis, basi bracteatis; *fœm.* plerumque uniflori, apice sub ovario bibracteati, bracteis ovatis membranaceis, appressis. Flores parvi, inconspicui: *masc.* perianthium profunde in 6 lacinias ovatas demum reflexas fissum. Stam. 6, singulo ad basin singulæ laciniae: Filamenta brevissima: Antherae subrotundæ. Ovarii rudimentum nullum infra perianthium: supra ovarium abortivum crassiusculum, cylindraceum: Styli 3 patentes subulati.—*Fœm.* Perianthii tubus ovario adnatus, triangularis, elongatus, superne attenuatus; limbus 6-partitus ut in *masc.* Staminum rudimenta ad basin limbi calycini. Styli 3 lato-subulati, patentes, basi in columnam uniti.

The smallest of all the hitherto discovered species of this extensive genus, and only known to me from the specimens communicated by the two collectors above-mentioned, and from living plants in Mr. Veitch's Nursery.

Fig. 1. Female plant; *nat. size.* *f. 2.* Flower. *f. 3.* Transverse section of ovary. *f. 4.* Vertical ditto. *f. 5.* Portion of a male plant. *f. 6.* Male flower.—All but *f. 1* & *5*, *magnified.*



TAB. DCLXXIX.

CRYPTONEMIA ? FORBESII, *Harv.*

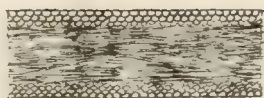
Caule cylindraceo cartilagineo dichotomo, foliis exacte reniformibus sessilibus amplexicaulibus horizontalibus fusco-rubris coriaceis.

HAB. Dredged in the Mediterranean Sea, 8 miles off the Island of Paros in 50 fathom water, *Prof. Edward Forbes*, 1841.

Stem cylindrical, solid, nearly $\frac{1}{2}$ a line in diameter, at first simple, about a quarter of an inch long, and expanding at the apex into a horizontal reniform leaf; then lengthening, by the growth of the summit through the base of the leaf (which thus becomes amplexicaul to the new stem,) and expanding into a new leaf; and so it continues alternately lengthening and forming new leaves at intervals of from a quarter to half an inch; each leaf, which at first was terminal, becoming by the successive growths of the stem, lateral and amplexicaul. As the stem advances, it is forked at every second or third leaf, and this being repeated, an irregularly dichotomous leafy frond is at length formed. Leaves about half an inch asunder, $\frac{1}{2}$ - $\frac{3}{4}$ inch in diameter, exactly reniform, somewhat wavy, coriaceous-membranaceous, thickish, without vein or rib, dull brownish-red, of a very dense structure, consisting, *internally*, of a close web of slender, entangled, somewhat coloured fibres, *externally* of a stratum of minute polygonal cellules. *Fruit* unknown.

The genus to which this very remarkable plant belongs is extremely doubtful, and probably, when the fruit is known, it will be found necessary to constitute it the type of a new one. I refer it provisionally to *Cryptonemia*, Ag., on account of a resemblance in the structure of the frond, but its mode of foliation is altogether peculiar, and the colour reminds us more of that of the *Rhodomeleæ*, than of any species of *Cryptonemia*. One drawing is made from a single specimen in the Herbarium of Prof. Forbes.—*W. H. Harvey*.

Fig. 1. Leaf, slightly *magnified*. *f. 2.* Transverse section of the same; *magnified*.



2.



TAB. DCLXXX.

STELLARIA DECIPIENS, *Hook. fil.*

Glabra, caule decumbente dichotome ramoso, foliis recurvis omnibus (etiam supremis) petiolatis obovato-rhombeis acutis apice callosis carnosulis siccitate punctis minutis elevatis asperis, petiolis subciliatis, pedunculis di-trichotomis (rarius unifloris) folia plerumque superantibus ad furcaturam pedicelloque unico medium versus 2-bracteatis, bracteis ovatis acutis scariosis albidis, petalis 5 bipartitis calycem æquantibus interdum brevioribus v. nullis filamentisque ima basi dilatatis fere hypogynis, stylis 3.

Stellaria decipiens, *Hook. fil. Fl. Antarctica*, v. 1, p. 7.

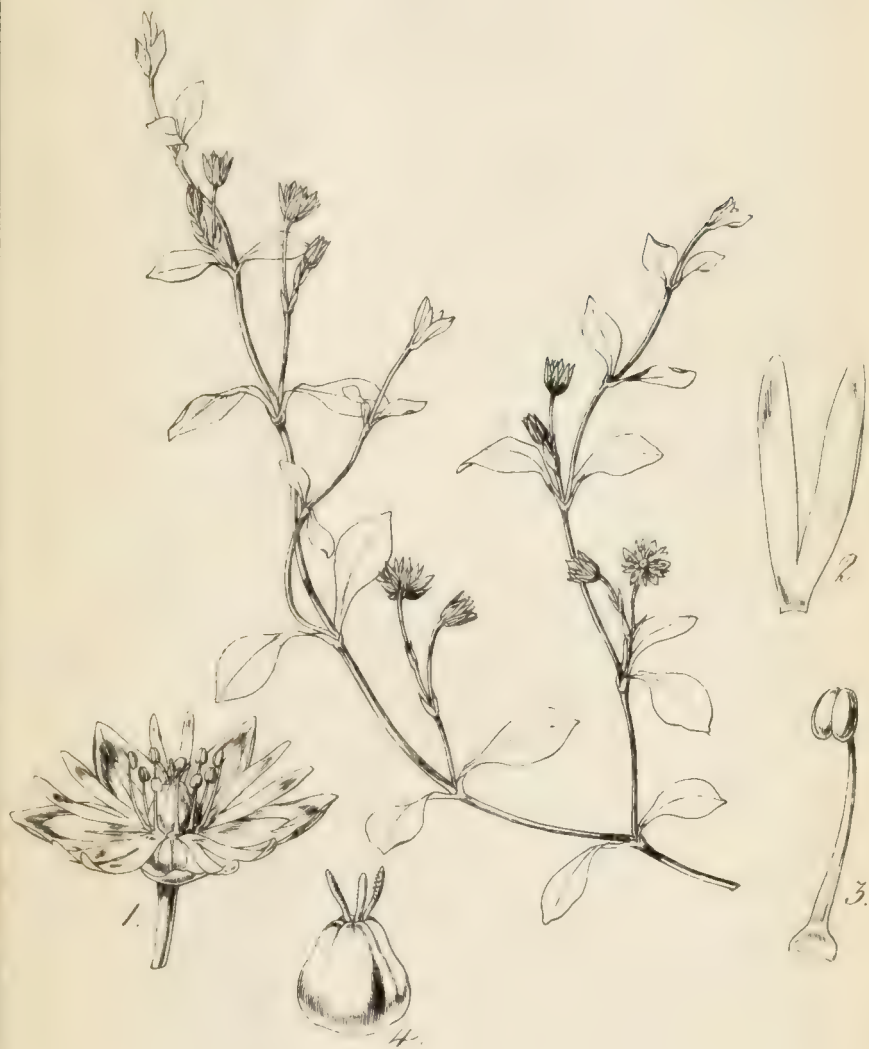
HAB. Lord Auckland's and Campbell's Islands; common on the low grounds, especially in the woods, and near the sea.

Caules tetragoni, e basi valde ramosi, filiformes, 3-5 unc. longi.

Folia carnosula, 3-5 lin. longa, obovata seu rhomboidea, hinc inde siccitate minute tuberculata. *Petioles* 1-3 lin. longi, latiusculi. *Pedunculi* folio plerumque longiores, solitarii, raro uniflori, bifidi seu trifidi; ramis inæqualibus. *Petala* sæpe 0.

In many respects this agrees with the *S. uliginosa*, Murr., and more particularly in the size and arrangement of the inflorescence; but the stems are always decumbent, the leaves all petiolate, very patent or recurved, and not at all broader, or ovate, at the base; the callous apices are common to both species. The peduncles generally bear two pedicels, which have a pair of bracts at the base, and a pair on one of the pedicels; whereas in *S. uliginosa* the peduncle is trichotomously divided, with the intermediate pedicel only destitute of bracts. The styles seem to be constantly three, and the stamens and petals are less decidedly perigynous than in the latter plant. In form, the leaves resemble those of *S. media*, With.; but the inflorescence is very different, and the stem wants the alternate line of hairs.—*J. D. H.*

Fig. 1. Expanded flower. *f. 2.* Petal. *f. 3.* Stamen. *f. 4.* Pistil;—*magnified.*



TABS. DCLXXXI, DCLXXXII.

ACROSTICHUM (Campium) PROLIFERUM, Hook.

Caudice repente, frondibus pinnatis, pinnis petiolatis sterilibus oblongis basi acutis apice acuminatis acumine serrato terminali longissimo sinuato-pinnatifido apice prolifero bulbifero radicante, fertilibus lineari-elongatis facie superna conduplicatis.

HAB. Bombay, *Dr. Falconer.*

I am indebted to Dr. Falconer for this new *Acrostichum*, which he received from Bombay. It belongs to a group having the veins united by transverse arched veinlets which give out, from the middle, one or more veinlets; of these secondary veinlets the lower ones are free, and the upper ones often unite with the transverse veinlets above, and then they anastomose in greater or less degree towards the margin. This veining constitutes the Genus *Campium* of Presl, and we have examples in the *Acrostichum subcrenatum*, Hook. et Grev. Ic. Fil. t. 110. & *A. virens*, Ic. Fil. t. 221. From those species ours is abundantly distinct. Indeed, in general appearance it more nearly resembles the *A. flagelliferum* (Ic. Fil. t. 23); but the pinnæ are more numerous, and the fertile pinnæ and the venation are very different.





TAB. DCLXXXIII.

LORANTHUS ALBIFLORUS, *Hook.*

Foliis suboppositis lato-lanceolatis acuminatis integerrimis coriaceis basi in stipitem perbreve decurrentibus, paniculis compactis axillaribus folio brevioribus, ramulis trifloris, bracteis minutissimis squamæformibus, petalis 6 e basi ad medium erectis approximatis dein reflexis, filamentis basi liberis, antheris ovatis subsagittatis mucronato-acutis dorso affixis, stylo longitudine staminum apice obliquo.

HAB. Andes of Quito, elev. 8500 feet, *Dr. W. Jameson.*

I do not find this anywhere described. It must, in a recent state, be a very handsome species, loaded with its copious panicles of rather large white flowers, shorter, indeed, than the leaves, but very conspicuous from their number, arising as they do from the axils of all the upper leaves. The anthers are large and versatile, or attached by their back to the apex of the filament.

Fig. 1. Flower. *f. 2.* Calyx and Pistil. *f. 3.* Anther;—*magnified.*



TAB. DCLXXXIV.

CAMPANULA VIDALII, *H. C. Watson.*

Fruticulosa viscida, foliis imbricatis (sæpius in rosulas terminales confertis) crassis coriaceis glabris spatulato-oblongis crenatis marginibus revolutis, superioribus sparsis lanceolatis subintegris, floribus racemosis cernuis, lobis calycis brevibus triangularibus, corolla campanulato-infundibuliformi supra basin contracta, stigmatibus oblongis.

Campanula Vidaliana, *H. C. Wats., Ms. (No. 113 of "Plants collected in the Azores, in 1842.")*

HAB. On an insulated rock off the east coast of Flores, between Santa Cruz and Ponta Delgada, *Capt. Vidal, R.N.*

I was indebted to Capt. Vidal for the very few specimens of this remarkable *Campanula*, distributed with the other plants collected by myself in the Azores. Only fragments were obtained; and I have seen neither the root, nor the fruit more advanced than the flowering stage. Apparently the generic character is that of *Campanula*, although the leaves and branches differ widely from those of all the other species known to me, and more recall to mind some species of *Saxifraga* or *Sempervivum*. The branches are dichotomous; each fork terminating in a rosette of leaves, intermediate in texture between coriaceous and succulent, and a similar rosette is sessile between the forks. The branch is thickened where these rosettes occur, and ultimately covered with scales formed by their persistent bases. The flower-stalk shoots up from the tuft of leaves, as in species of *Sempervivum*. Several of the flower-buds are abortive, or else developed later and irregularly. Corolla white or cream-colour, shaded with pink externally.—*H. C. Watson.*

Fig. 1. Immature fruit; slightly *magnified*. (This, as well as most of the figures, is copied from a faithful drawing by Mr. Watson.) *Ed.*



TAB. DCLXXXV.

EPILOBIUM CONFERTIFOLIUM, *Hook. fil.*

Herbaceum glabrum, caule repente radicante ramoso, ramis divaricatis decumbentibus teretibus cum lineis duabus oppositis incanis, foliis oppositis valde approximatis subimbricatis breviter petiolatis oblongo-obovatis obtusis subcarnosis glaberrimis remote et obscure dentatis, petiolis margine incanis basi connatis subvaginantibus, pedunculis sessilibus solitariis axillaribus, floribus erectis, petalis rubris subpurpureisve ad medium bifidis, ovario glaberrimo, stylo oblique clavato, capsula lineari-elongata glaberrima.

Epilobium confertifolium, *Hook. fil. Fl. Antarct.* 1, p. 10.

HAB. Lord Auckland's group, and Campbell's Island: on grassy banks, and in moist places, abundant.

This little plant occupies the place in these islands that the *E. alpinum*, L. does on the European mountains. The two species are indeed so very closely allied, that we look in vain for further constant characters than the creeping, and rooting, and much branched stem, the densely crowded, broader and more obovate leaves, with almost sheathing petioles, and the deeply bifid petals. The more remarkable points of similarity, besides the general appearance, are the lines of pubescence on the stem, the sessile or shortly pedunculated ovaria (which in *E. alpinum* are however often on longer stalks), the deep colour of the petals, and the simple clavate stigma, which is here decidedly oblique and gibbous at the base. Very similar species are found on the Andes of Peru, and in Chili.—*J. D. H.*

Fig. 1. Flower, scarcely expanded. *f.* 2. Expanded blossom. *f.* 3. Petal;—*magnified.*



TAB. DCLXXXVI.

CARDAMINE CORYMBOSA, *Hook. fil.*

Hirsutula v. glabra, caulibus perbrevibus rigidis ad basin ramosis, ramis gracilibus flexuosis diffusis parce foliosis, foliis longe petiolatis pinnatisectis, foliolis 3-5 sub-petiolulatis rotundatis terminali majore lateralibus remotis sæpe minutis, floribus corymboso-fasciculatis axillaribus v. terminalibus, corymbis nunc proliferis, pedicellis brevibus demum valde elongatis, siliquis anguste linearibus in stylum brevem attenuatis, replo angusto, valvis planis, stigmatе minuto.

Cardamine corymbosa. Hook. fil. Fl. Antarct. v. 1, p. 6.

HAB. Campbell's Island. On turfy ground near the sea, common.

This is a small and very distinct species of *Cardamine*, wiry and fragile in every part. The stems short, or, rather at once, after springing from the collum, divided into spreading, ascending, filiform branches, with few and small leaves; and with corymbs, or, more correctly speaking, fascicles of flowers, which at no period seem to constitute a raceme. Occasionally even the flower is solitary and axillary; generally, several rise together from the side or apex of a stem, subtended by a leaf; sometimes, a pedicel appears proliferous, running out into a stem, and bearing a fascicle or corymb and a leaf at its apex, so that the inflorescence has little the appearance of that of a Cruciferous plant. *J. D. H.*



TABS. DCLXXXVII, DCLXXXVIII.

LEIANTHUS UMBELLATUS, *Griseb.*

Arborescens, ramulis herbaceis, foliis obovato-oblongis elongatis acutissimis basi longe attenuatis, petiolis oppositis connato-vaginantibus, pedunculis axillaribus folio brevioribus, floribus umbellatis, umbella bracteis 2-3 amplis involucrata, corollis infundibuliformi-cylindræis ore subobliquo, staminibus styloque exsertis.

Leianthus umbellatus, *Griseb. Gen. et Sp. Gent. p.* 199.

Lisianthus umbellatus, *Sw. Fl. Ind. Occ. 1, p.* 350.

HAB. Jamaica. Lofty mountains of St. Jacob's, *Swartz*; summit of the Dolphin Mountain, parish of Hanover, *Dr. Macfadyen*, *Mr. Purdie*.

Frutex seu *Arbor* insignis, 20-pedalis. *Folia* numerosa in ramulos herbaceos, 6-uncialia ad pedalem, coriaceo-membranacea, basi in petiolum longe sensimque attenuata. *Pedunculi* solitarii, 4 unciales ad spithamæam. *Umbella* 2-3 uncias lata, 8-12-14-flora, involucrata. *Involucris foliola* 2-3 ampla, umbella longiora, ovata, acuta, unico sæpe minore. *Pedicelli* bracteolati (bracteolis parvis subulatis) breves, 2-3 lineas longi. *Calyx* parvu, tubulosus, 5-fidus. *Corolla* unciam longa, ut videtur luteo-alba, ore parum obliquo, 5-fido, lobis rotundatis, acutis, erectis. *Antheræ* exsertæ, sagittatæ, apiculatæ, margine utrinque dehiscentes. *Stigma* dilatato-clavatum.

One of the most remarkable of the *Gentianeæ*; a tree or large shrub, 20 feet high! apparently of great rarity. No one seems to have gathered it since the days of *Swartz*, except *Dr. Macfadyen* and *Mr. Purdie*.

Fig. 1. Flower. *f. 2.* Anther. *f. 3.* Pistil. *f. 4.* Stigma:—*magnified.*



TABS. DCLXXXIX, DCXC.

CONRADIA CALYCOSA, *Hook.*

Fruticosa glabra, foliis oblongis serratis lævibus petiolatis basi acutis apice acuminatis subtus discoloribus, pedunculis axillaribus solitariis unifloris folio sublongioribus, laciniis calycinis subulatis longissimis corollam obliquam subcampanulatam superantibus, staminibus styloque longe exsertis, capsula elongata cylindraceo clavata sulcata.

HAB. Jamaica ; Sedburgh, Manchester, *Mr. Purdie.*

This is a very fine and undescribed species of *Conradia* (Mart. not Nutt.) with large flowers, solitary on each peduncle, remarkable for the great length of the calycine segments, which much exceed the corolla, and the very protruded stamens and style. It forms a shrub, 5 to 10 feet high, according to Mr. Purdie, flowering copiously in December. Leaves 46 inches, long, firm, but rather membranaceous, glabrous, smooth to the touch, pale, and sometimes rather rusty beneath, where the pinnated veins are prominent and darker coloured, and the veinlets are reticulated. Petioles an inch or an inch and a half long. Peduncle rather stout, about as long as the leaf, but including the flower (for the calyx with the tube often measures $2\frac{1}{2}$ inches longer.) The club-shaped sulcated capsules, with the long persistent segments of the calyx (resembling the legs of some insect) have a singular appearance.



TAB. DCXCI.

TOFIELDIA (ISIDROGALVIA) SESSILIFLORA, Hook.

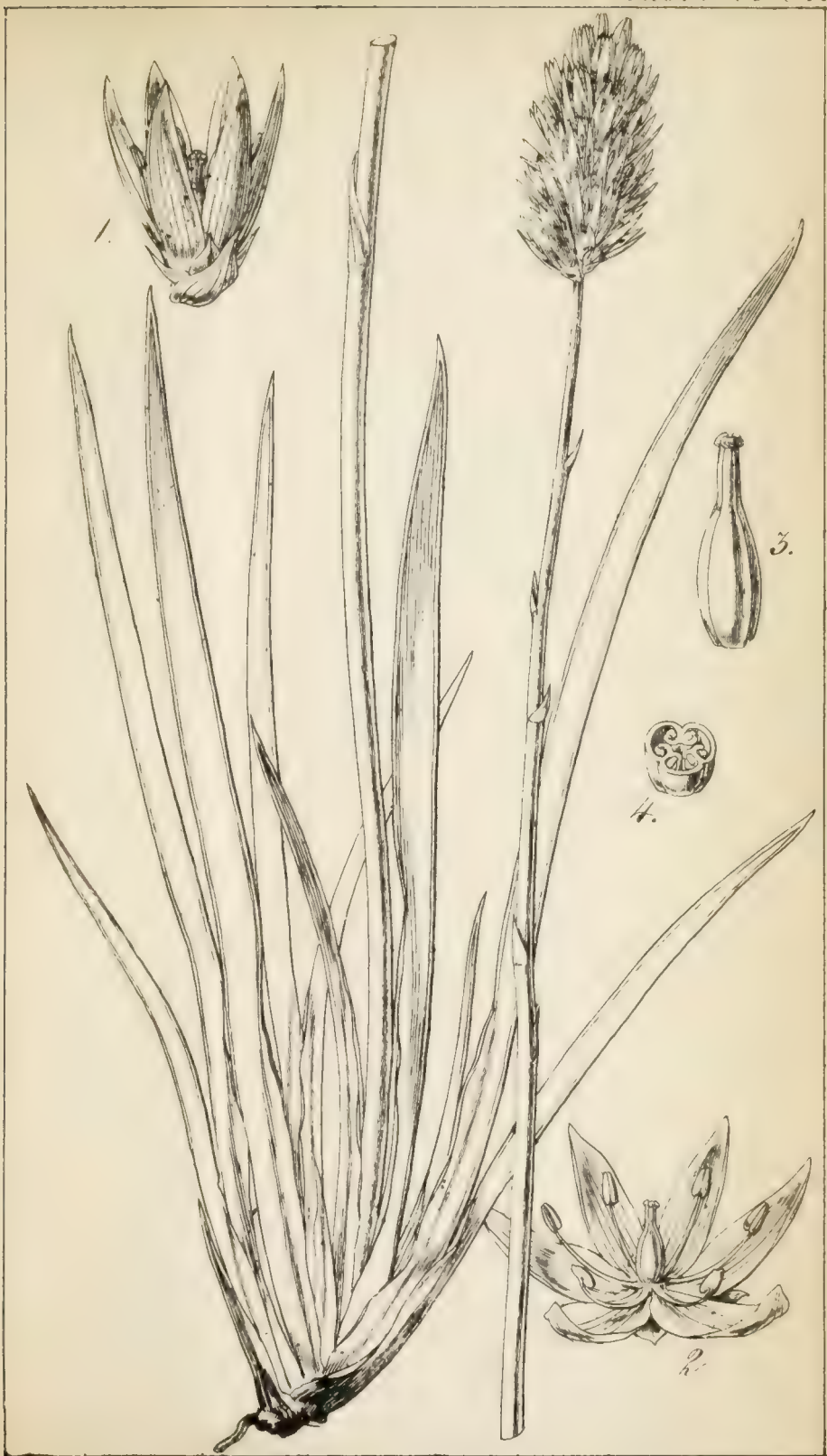
Glabra, calyculo triphylo ad basin perianthii, scapo elato rigido remote bracteato, floribus spicatis, sepalis lineari-lanceolatis, foliis ensiformi-linearibus acuminatis rigidis profunde striatis marginibus incrassatis pubescentibus.

HAB. Caraccas, *Linden*, April, 1842 n. 410; Andes of New Grenada, *Linden* (1842-3) n. 410.

Radix e fibris crassiusculis, rigidis. Folia lineari-ensiformia, rigida, acuminata, 5-10 uncias longa, 3-4 lineas lata, pungentia, erecta, stricta vel subfalcata, pulcherrime profunde arcte striata, margine usque ad apicem incrassata, pubescentia, basi equitantia, submembranacea. Scapus pedalis, fere sesquipedalis, basi crassiusculus, superne attenuatus, bracteatus; bracteis lanceolatis acuminatis, remotis, superioribus magis approximatis minoribus. Spica oblongo-ovalis, obtusa, 14-16-flora. Flores approximati ut videtur lutei, majusculi, omnino sessiles, bracteis tribus ovatis acuminatis calyculum referentibus basi stipati et bractea majore sub calyculum. Sepala 6, anguste lanceolata, obtusiuscula, striata, persistentia. Stamina 6, singulo ad basin cujusque sepalii. Filamenta subulata, glabra. Antheræ ovatæ. Ovarium oblongum, 3-loculare, loculis ut videtur e valvarum marginibus introflexis, marginibus seminiferis.

Nearly allied to *Tofieldia frigida* (which is surely identical with *Isidrogalvia falcata*, Ruiz and Pav. Fl. Per. 3, p. 302, f. b.) but differing specifically in the greater size, in the truly sessile flowers, and in the thickened margin of the leaves. It is probable, if we were to compare the ripened fruit of *Isidrogalvia* (R. and P.) with that of *Tofieldia*, we should find the former to be a distinct genus, as indicated by the larger, rigid, and pungent leaves, larger and coloured sepals, and general aspect. It is no doubt the representative of *Tofieldia* in the southern hemisphere.

Fig. 1. Flower and bracteas. f. 2. Expanded flower. f. 3. Pistil. f. 4. Section of the ovary:—*magnified*.





TAB. DCXCII.

LEPTONEMA, Hook.

GEN. CHAR. *Sepala* magna, ovalia, erecta, concava, herbacea, obtusa, margine membranacea. *Petala* obovato-cuneata, in unguem attenuata, demum superne patentia, emarginata, eroso-serrata, calycem duplo superantia. *Stamina* 6, quorum 4 paulo longiora, calycem fere æquantia. *Filamenta* elongata, gracilia, filiformia, edentula, basi latiora. *Antheræ* ovales, paulo supra basin affixæ. *Ovarium* sessile, ovatum, plano-compressum, biloculare, *loculis* subsexovulatis, *ovulis* pendulis; *podospermis* elongatis. *Dissepimentum* integrum. *Stylus* longissimus, gracilis, filiformis, petala superans. *Stigma* capitatum. *Fructus* immaturus ut in ovario, *stylo* longissimo persistente terminatus.—*Fruticulus lignosus* Novæ Granatensis. *Folia ramulos breves terminantia, linearia, subcarnosa, integerrima, glabra*; *hi ramuli in pedunculos floriferos 4-5-unciales prolongati sunt*. Flores *racemosi, remoti, bracteati*. Bracteæ *folia simulant*es. *Pedicelli graciles, demum fere unciales, erecto-patentes*. Flores *cernui, subcylindracei, magni*. *Petala in sicco flavicantia*. *Pedicelli calycesque parce pilosi, pilis simplicibus vel apice ramosi, in glandulam seu vesiculam oblongam impositi*.

Leptonema Lindenii.

HAB. New Grenada, *Linden* (1842-3) n. 1433.

Although unacquainted with the mature fruit of this plant, I can have little hesitation in considering it a hitherto undescribed genus; in habit like none that is known to me. In my single specimen (here represented) the lower portion is thick and woody, and even knotted. Above, it divides into short branches having closely-placed leaves, and elongated into racemes of flowers which are of a cylindrical form. The large size of the calyx and corolla are very unfrequent in the natural family to which the plant belongs. The great length of the filaments of the stamens and styles, too, is remarkable. The young fruit is singularly compressed, even flattened; in that state, perhaps more resembling that of *Draba* than anything else. The name alludes to the long slender filaments and style.

Fig. 1. Flower. f. 2. Hairs and glands from the calyx. f. 3. Petal. f. 4. Stamens and pistil. f. 6, 7. Pistils. f. 7. Transverse section of an immature fruit. f. 8. Immature silicula with a valve removed. f. 9. Immature seed and seed-stalk:—magnified.





TABS. DCXCHII, DCXCIV.

SLOANEA JAMAICENSIS, Hook.

Foliis (amplis) ovatis acuminatis apicem versus obscure sinuato-dentatis, pedunculis axillaribus solitariis unifloris pendulis, sepalis 4 petalisque 4 minoribus incisissimis extus subpubescentibus intus velutinis, capsula maxima ex apice profunde 4-valvi lignosa 4-loculari extus setis rigidis longis echinata.

Sloanea? "The large oval-leaved Sloanea or Brake-axe Tree."

P. Br. Jam. p. 250.

HAB. St. Anne's parish, Jamaica (*P. Browne*) *Mr. W. Purdie*. Also in the districts of Manchester and Hanover, *Mr. W. Purdie*. Iron-wood of the colonists (not of Lunan.)

Arbor excelsa. Ramuli rugosi, fusci, glabri. Folia alterna, petiolata, 6-8 uncias longa, ovata, rigide submembranacea acuminata, integerrima, v. apicem versus sinuato-dentata, penninervia, reticulatim venosa, nervis venisque subtus prominentibus, utrinque glaberrima. Petioli 1-1½ unciam longi, teretes. Stipulæ parvæ, ovato-acuminatæ, valde caducæ. Pedunculi biunciales, axillares, solitarii, uniflori, penduli, medio bibracteolati, bracteis deciduis. Flos majusculus, unciam latus. Calyx profunde 4-partitus seu 4-sepalus. Sepala late ovata subanguste acuminata, coriacea, extus puberula, intus cinereo-velutina. Petala 4, cum sepalis alternantia, iis minora, ovata, subacuminata, parce incisa, sub discum hypogynum inserta, textura pubescentia calycis. Stamina numerosa, petalis breviora, pluriserialia, in toro seu disco carnosolato elevato punctato velutino inter ovarii basin et petala sita. Filamenta brevissima, sericea. Antheræ lineares, terminales, erectæ, puberulæ, apiculatæ, biloculares, loculis apice utrinque poro oblongo dehiscentibus. Ovarium conicum, 4-loculare, sericeo-setosum. Stylus subulato-filiformis, stamina superans. Stigma acutum. Fructus: capsula magna subrotundotetragona, crassa, lignosa, 4-valvis, valvis ex apice fere ad basin dehiscentibus, 4-locularis, dissepimentis e centro valvarum, dorso setis longis copiosis rectis echinato. Semina 2-plura in quoque loculo, magnitudine *Amygdali* seminis, ex angulo interiore pendentia, arillo carnosopulposo flavescente tecta. Albumen paucum.

(For further remarks see our next Leaf.)

Fig. 1. Section of a portion of the flower. *f. 2.* The stamens and two of the petals removed. *f. 3.* Pistil. *f. 4.* Section of the ovary:—*nat. size.*



TABS. DCXCV, DCXCVI.

SLOANEA JAMAICENSIS, Hook.

FRUIT.

(For a Description and Figure of a flowering specimen, see our preceding PLATE.)

I have ventured to place this fine plant in the genus *Sloanea*, as indeed hinted at by Patrick Browne, notwithstanding the presence of petals, and the anthers opening by pores at the apex, and the one-flowered peduncles. Indeed the limits of the genus seem to be very little understood. My specimens of *Sloanea dentata* exhibit anthers opening by pores, and in other respects our present plant has a very close affinity with that. Mr. Purdie speaks of it as producing one of the hardest of woods, so hard as to turn the edge of the best tempered axe, and hence its name of *Break-axe wood*, *Iron-wood*; but it is not the *Iron-wood* of Lunan, which includes two plants, the *Fagara Pterota*, and a species of *Ternstræmia*, allied to if not the same as *T. peduncularis*. The present plant is evidently the *Sloanea* ? of Patrick Browne's Nat. Hist. of Jamaica, of which he says he saw but one tree; but he was informed "it was pretty common in the mountains of St. Anne's, and esteemed one of the best and largest timbers in the wood; though so very hard that it is found a difficult matter even to cut it down, and from thence its common appellation (Brake-axe tree). The seeds are much coveted by mackaws and parrots, and the kernels are of an agreeable taste enveloped in a soft mucilage of a scarlet colour." It is singular that nothing has been heard of this tree, from the days of Patrick Browne to the present time. Mr. Purdie, however, in a recent letter from Jamaica, remarks, "I think it very unlikely that any bird should break or perforate these capsules to obtain the seeds, not only because of its extreme hardness, but from the well known instinct of the bird, rarely if ever allowing it to attack unripe fruit. I have never seen the capsules perforated. As soon as the fruits are ripe, they burst open and exhibit the delicately flavoured seeds. They then fall to the ground and appear imperishable, covering the ground for a great extent at all seasons of the year.

Fig. 1. Young fruit. f. 2. Mature fruit, the capsule having burst. f. 3. Seed, with its pulpy coat. f. 4. Section of ditto, showing the seed itself; *nat. size*. f. 5. Transverse section of the seed. f. 6. Vertical section of ditto. f. 7. Side view of the embryo:—slightly *magnified*.



TAB. DCXCVII.

MARTENSIA ELEGANS, *Hering*.

Fronde plana delicata membranacea rosea reticulata, disco avenio, margine processibus veniformibus alatis repetitum anastomosantibus rete elegantissimum formantibus fimbriato, granulis tetrasporis in soros collectis supra frondis discum, vel plus minus sparsis in costas reticuli, "capsulis sphæricis reticulo affixis sporidia subglobosa foventibus."

Martensia elegans, *Hering*, *Ann. of Nat. Hist.* v. 8. p. 92.

Hemitrema Kraussii, *Brown*, *ms.*—*Endlicher*, in *Gen. Plant.*

Suppl. III. p. 50.

HAB. Marine rocks, Natal Point, S. Africa, *Mr. Krauss*.

Frond 1-1½ inch high, at first flabelliform, at length ovate, very delicate, rose-coloured, distinctly reticulate bearing towards the edge sori of quaternate granules. At first the edge is perfectly even; but at a certain stage of growth linear processes are thrown off from it, which are thicker than the substance of the frond. These are furnished with a delicate wing-like border, and anastomose repeatedly with one another in such a way as to form a beautiful network consisting of more or less oblong reticulations, arranged concentrically with the border of the fronds. The edge of the net-work at length becomes lobed; but the margin is tolerably even. It forms, in consequence of the winged border of the processes, a mass very much thicker than the frond. Fructifying tetrasporous granules like those of the frond are scattered over the processes, and sometimes are collected in sori.

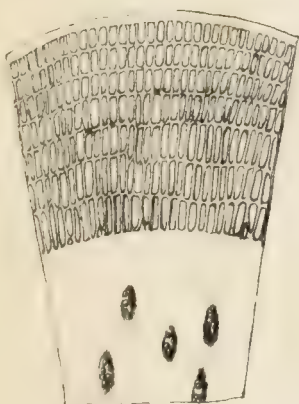
Without the net-work the frond and granules are precisely those of *Nitophyllum*. I have not had an opportunity of observing microscopically the capsuliferous individuals. *M. J. Berkeley*.

(In the net-work margin of this most beautiful *Alga*, *Mr. Fitch*, who made the accompanying drawing, observes that the net-work is double, and the upper and under layer are united by a transverse tissue, and it is in this *transverse* tissue that the sporules, and not in that on either surface are placed. Specimens of this plant were distributed with *Mr. Browne's* appropriate and earlier name of *Hemitrema*; and we wish we could have joined with *Endlicher* in adopting it, consistently with fairness to *Mr. Hering*. But it was first published under the name we have adopted in the *Annals of Natural History*.—*W. J. H.*)

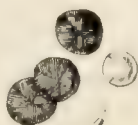
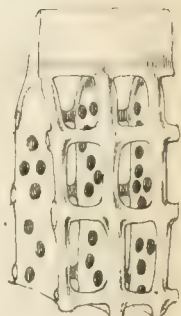
Fig 1. Portion of the plant. *f. 2.* Ditto of the reticulated margin. *f. 3.* Smaller portion of *f. 2*, showing the situation of the fructifications. *f. 4.* Portion of the disk of the plant with its fructifications. *f. 5.* sporules :—all more or less *magnified*.



2



3



4





TABS. DCXCVIII, DCXCIX.

PACHYSTIGMA, Hook. Gen. Nov.

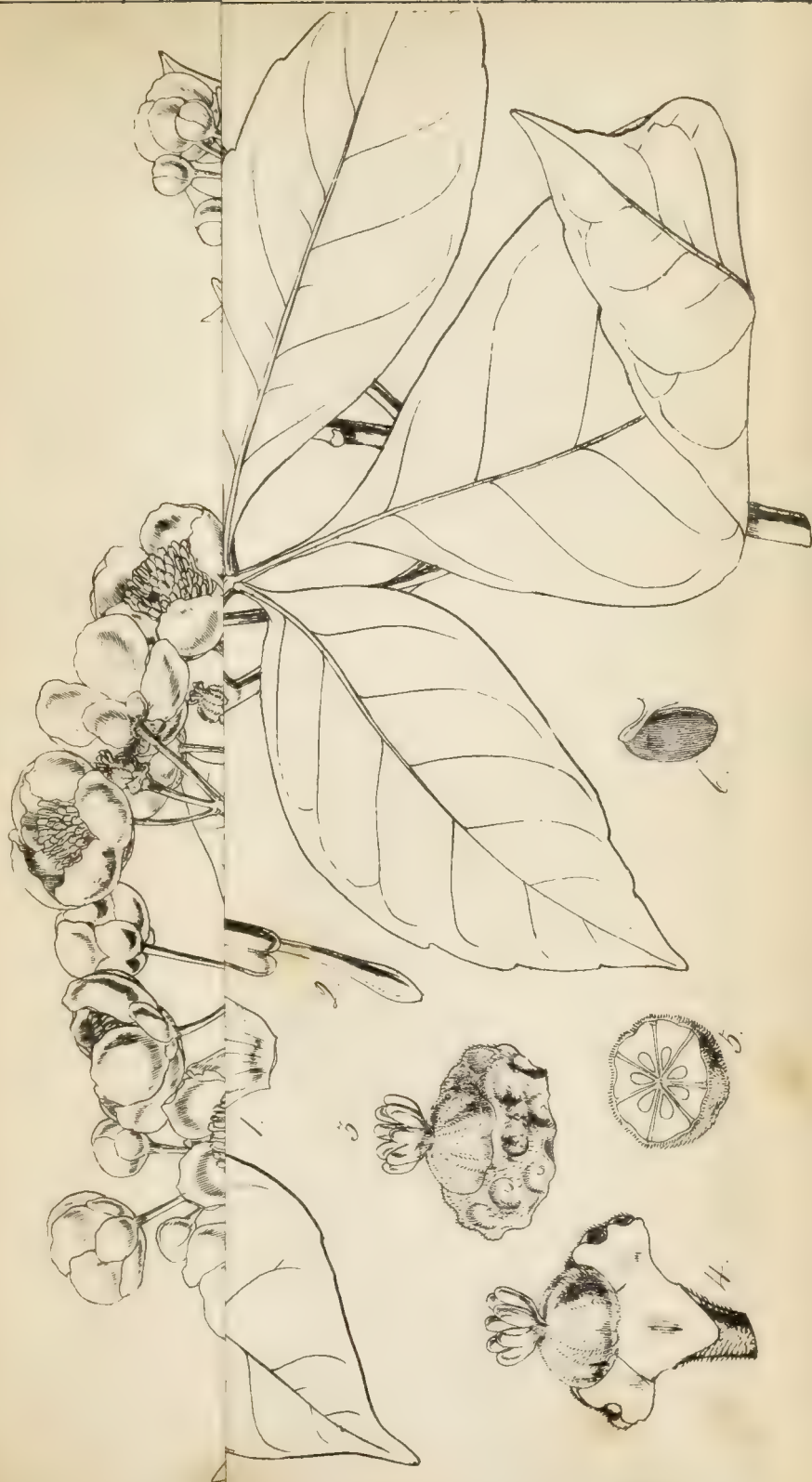
GEN. CHAR. *Calyx* subtriphyllus, *sepalis* concavis inæqualibus æstivatione imbricatis, interiore majore petaloideo. *Petala* 4, libera, subrotunda, concava, alba, impunctata; æstivatione imbricativa. *Stamina* plurima, sub 30, libera, gynophoro rugoso carnosio, majusculo, breviter stipitato, subbi-seriatim inserta. *Filamenta* erecta, brevia, lato-subulata. *Antheræ* ovales, biloculares, antice longitudinaliter dehiscentes. *Ovarium* globosum gynophoro impositum, 8-sulcatum, velutinum, 8-loculare, *loculis* biovulatis, *stigmatibus* magno carnosio irregulariter lobato deciduo coronatum. *Capsula* demum e cocculis 8 (quibusdam abortientibus), stellatim dispositis, basi coalitis, abortu plerumque monospermis: *epicarpio* sicco, subrugoso, dorso carina lata instructo; *endocarpio* cartilagineo, demum soluto. *Semen* oblique ovatum. *Podospermum* majusculum, carnosum, album.—Frutex seu arbor humilis Jamaicensis, valde ramosus; ramulis cortice lævi, viridi-fusco tectis. Folia alterna, exstipulata, trifoliolata, foliolis ovatis breviter acuminatis, integerrimis seu obsolete serratis, copiose pellucido-punctatis, petiolulatis, in petiolum articulatis, penninerviis; pedunculis axillaribus folio sublongioribus, parce subtrichotome ramosis, pedicellis basi bracteatis, bracteis lanceolatis petiolatis foliaceis. Flores majusculi, ut videtur, albi, extus puberuli, fragrantés. Fructus maturus sesquiunciam diametro.

Pachystigma pteleoides.

HAB. On the mountains of Santa Cruz, Jamaica, Mr. Purdie.

This is another remarkable new plant of Jamaica, for the discovery of which, in 1844, we are indebted to Mr. Purdie, Botanical Collector for the Royal Botanical Gardens of Kew. I am quite unable to refer it to any described Genus. In its unequal and imbricated sepals, and the general appearance of the flowers, it has an affinity with *Aurantiaceæ*; but the fruit is truly that of *Diosmeæ* among *Rutaceæ*, from all the described genera of which this is readily known by its floral coverings, its broad gynophore, its numerous stamens, and large irregularly lobed stigma.

Fig. 1. Petal. f. 2. Stamen. f. 3. Pistil and gynophore. f. 4. The same with the short stipes cut through. f. 5. Section of the ovary. f. 6. Seed:—magnified.



TABS. DCXCVIII, DCXCIX.

PACHYSTIGMA, Hook. Gen. Nov.

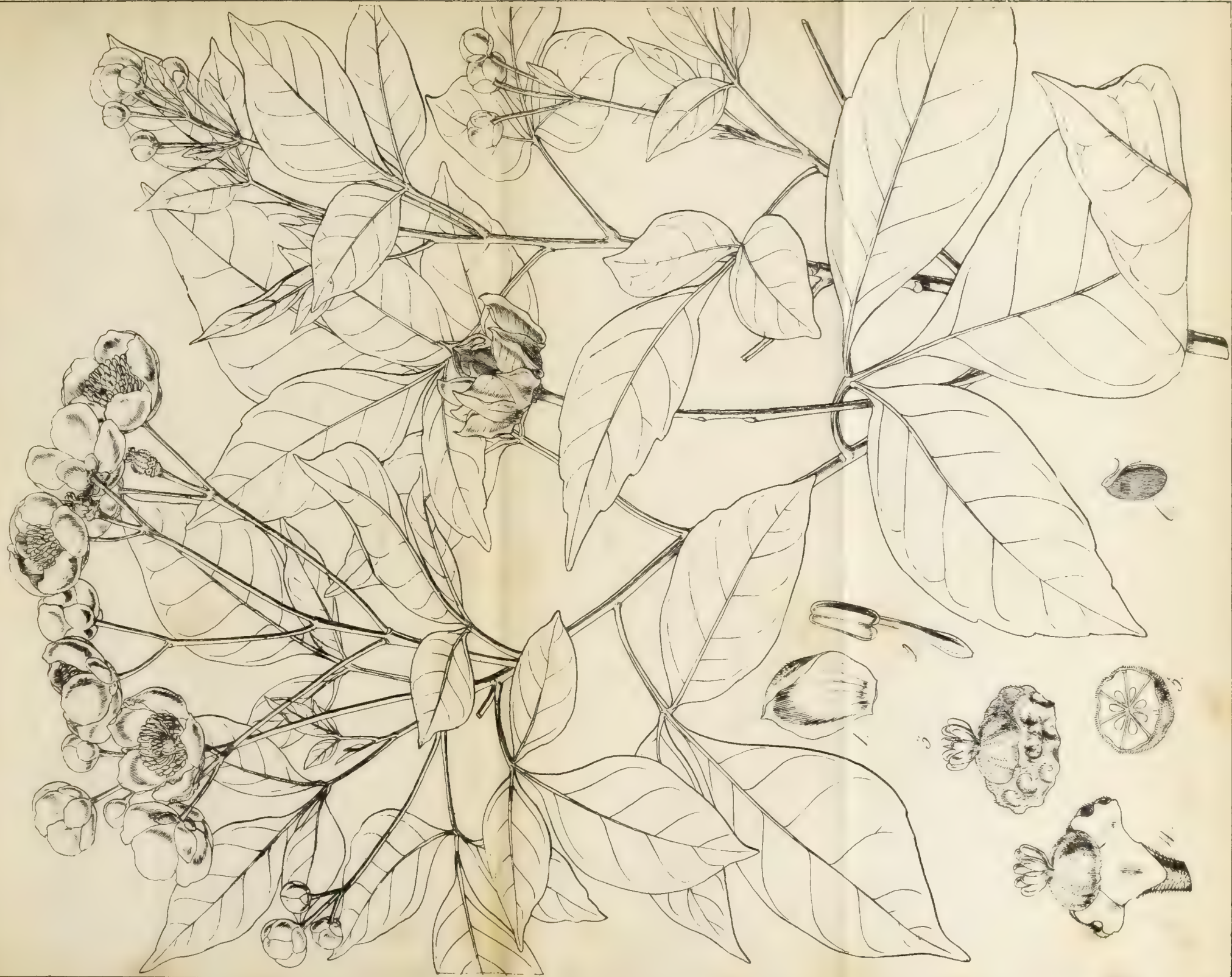
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Fig. 1. Petal. f. 2. Stamen. f. 3. Pistil and gynophore. f. 4. The same with the short stipes cut through. f. 5. Section of the ovary. f. 6. Seed:—magnified.



TAB. DCC.

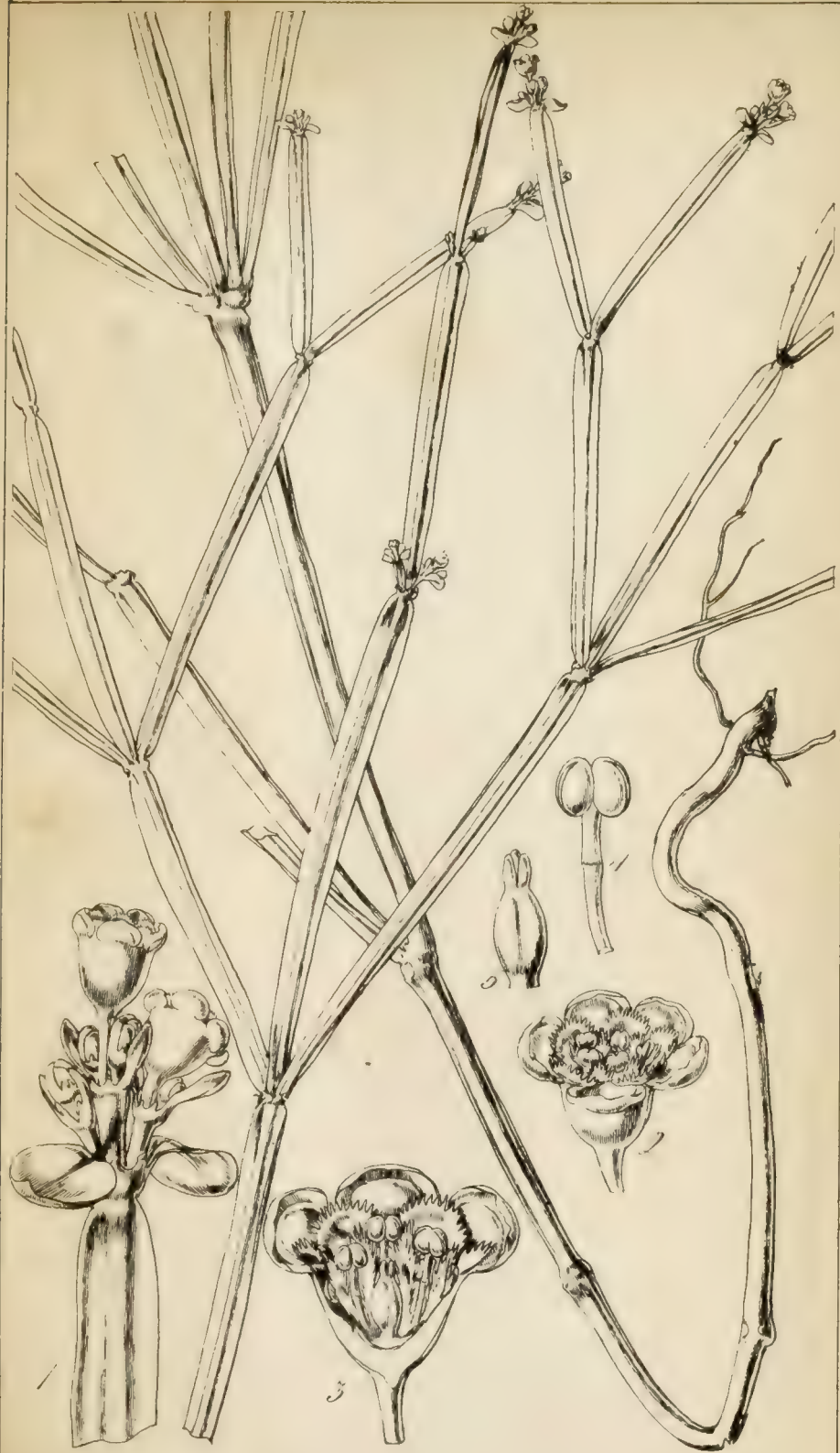
EUPHORBIA ALATA, Hook.

Suffruticosa, caulibus erectis di-trichotomis articulatis ramisque gracilibus compresso-planis utrinque alatis glaucis, articulis linearibus elongatis, foliis 2 raris terminalibus ovali-rotundatis deciduis, floribus solitariis utrinque ad genicula, plerumque 3 terminalibus minutis breviter pedunculatis, pedunculis bibracteatis, bracteis in axillo rudimentum floris gerentibus, involucri glandulis 5 squamisque 5 fimbriatis iis alternantibus.

HAB. Rocky woody place above Christiana, Manchester, Jamaica, growing with the *Lagetta lintearia*, or Lace-Bark Tree, Mr. Purdie.

Few plants, as is well known, can be more proteous in appearance than the various species of *Euphorbia*; but the most unusual forms are chiefly confined to Africa, the tropical parts of the new world producing but few species; though *there* is found the present very remarkable one, which but for its flowers might rather be taken for some flat-stemmed articulated *Viscum*, or an *Epiphyllum*, among *Cactææ*. Our specimen is about a foot high. From a fibrous, but ligneous root, arises a short cylindrical stem, woody at the base, soon becoming herbaceous, glaucous-green, firm and rigid, branched and jointed; the branches and articulations slender, compressed, two-edged with a wing-like border. Two small, shortly petiolated leaves, are seen at the apices of some of the ultimate articulations; but they are quickly deciduous, and the whole plant is very fragile at the joints. Flowers sometimes solitary at the joint, usually three appear together at the apex, and from between the two leaves; they are small, purplish-brown. The species is probably diœcious.

Fig. 1. Apex of a flowering branch. *f. 2.* Involucre with flowers. *f. 3.* The same laid open, showing the fimbriated scales, male flowers, and a solitary imperfect female flower in the centre. *f. 4.* Male flowers removed from the involucre. *f. 5.* Abortive female flower from ditto:—*magnified.*



Opuntia
monocarpa



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(OR VOL. V. OF THE ENTIRE WORK;)

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I N D E X

TO THE

PLANTS CONTAINED IN VOLUME I.,

(OR VOL. V. OF THE ENTIRE WORK ;)

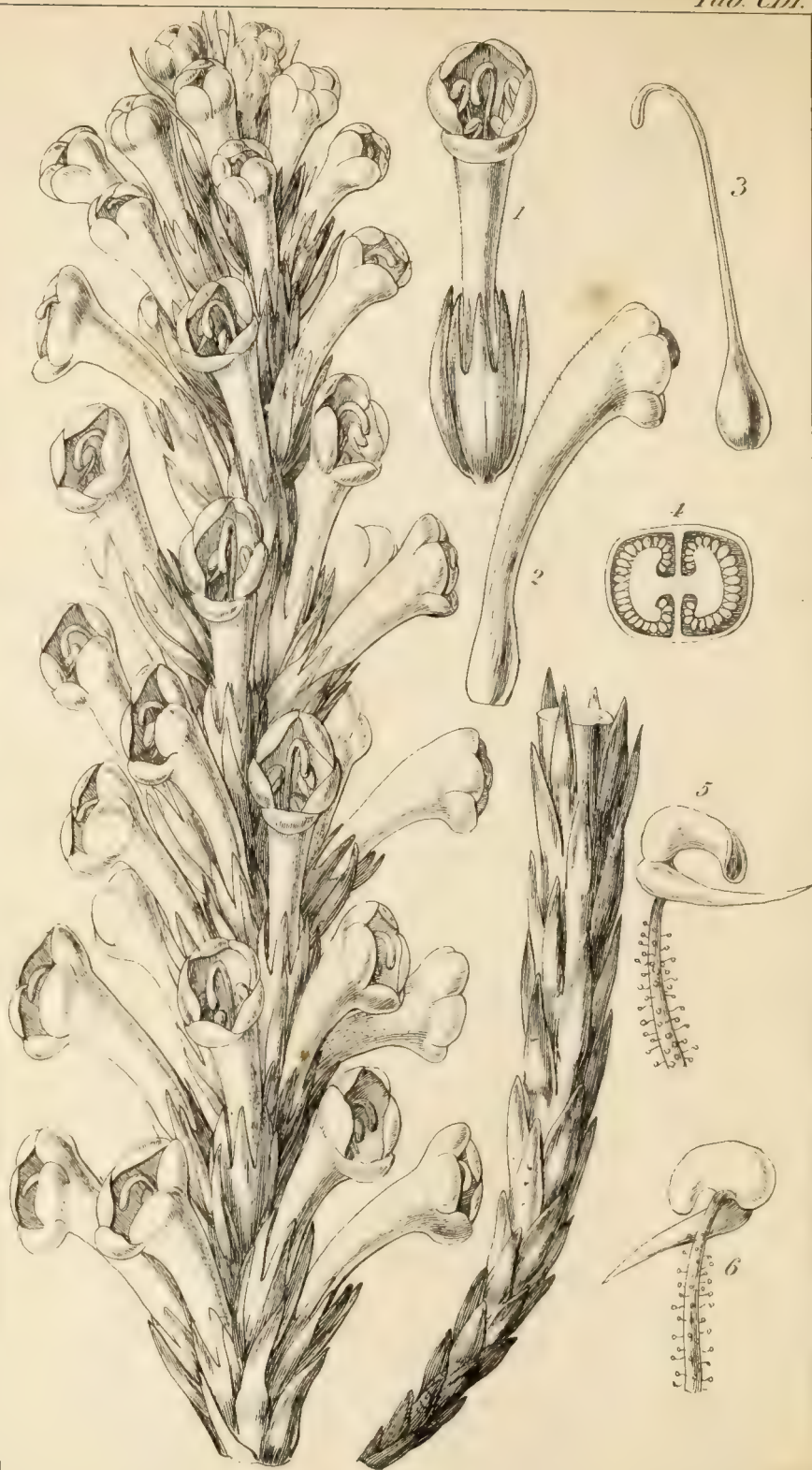
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<i>Fuchsia cordifolia, Benth. β.</i>	450	— <i>ferruginea, Hook.</i>	415
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Harveyanæ.

N. O. Scrophularinæ.

TAB. CDI.

AULAYA SQUAMOSA. *Harv.*

Floribus spicatis densis, corollæ limbo concavo integerrimo.

Harv. Gen. of S. African Pl. p. 250.

Orobanche squamosa. *Thunb. Fl. Cap. p. 455.*

HAB. Cape of Good Hope; sandy hillocks in low places; Swartland, Saldanha Bay, Piqueberg and Verloren Valley. *Thunberg.* "The only specimens I have yet seen were gathered at Brach-fontein by *Mrs. Van Schwon.*" (*Hon. W. H. Harvey*).

This Mr. Harvey describes as having stems 2-3 feet high, simple or branched, closely covered with appressed orange or golden scales, the calyces bright orange and yellow, the tube of the corolla a brilliant flaring yellow, and the limb deep orange.

Fig. 1. Front view of a flower with bractea. *f. 2.* Corolla. *f. 3.* Pistil. *f. 4.* Section of ovary. *f. 5, 6.* Anthers and upper part of the filaments:—*magnified.*



TAB. CDII.

QUERCUS SKINNERI. *Benth.*

Ramis glabris, gemmis lanatis, foliis petiolatis ovato-v. sublanceolato-oblongis sinuato-dentatis dentibus longe aristatis utrinque glabris v. subtus ad axillas venarum barbatis, fructibus sessilibus maximis, cupulæ plano-pateriformis lignosæ squamis arcte imbricatis tenuibus latis, glandula globoso-subconica lignosa basi lata umbilicata intus dissepimentis incompletis irregulariter subdivisa. *Benth. Pl. Hartw. p. 90. Lindl. in Gardener's Chronicle, 1841, p. 116, cum. Ic.*

HAB. Mountains, Guatemala. *G. U. Skinner, Esq.* Sides of mountains of Acatenango, Medio Monte and Quezaltenango, towards the Pacific Ocean. *Hartweg.* "Arbor pulcherrima, 50-70 pedalis. Folia utrinque viridia, iis *Q. acutifoliæ* v. *Q. Xalapensis* similia. Specimina omnia jam deflorata, florum masculorum tamen amentum unicum vidi emarcidum, generi *Quercus* omnino consimile. Glandula sæpe 2 poll. diametro, pericarpio crasso lignoso. Dissepimenta spuria ex endocarpio formata, per sulcos seminis excurrentia, valde irregularia sunt, nec loculos completos unquam efformans." *Benth. l. c.*

A figure of this curious acorn, which only yields in size to that of the following species, is given by Dr. Lindley in the *Gardener's Chronicle*, where he observes that the internal structure resembles that of the walnut.

Fig. 1. Acorn : nat. size.





TABS. CDIII. CDIV.

QUERCUS CORRUGATA. *n. sp.*

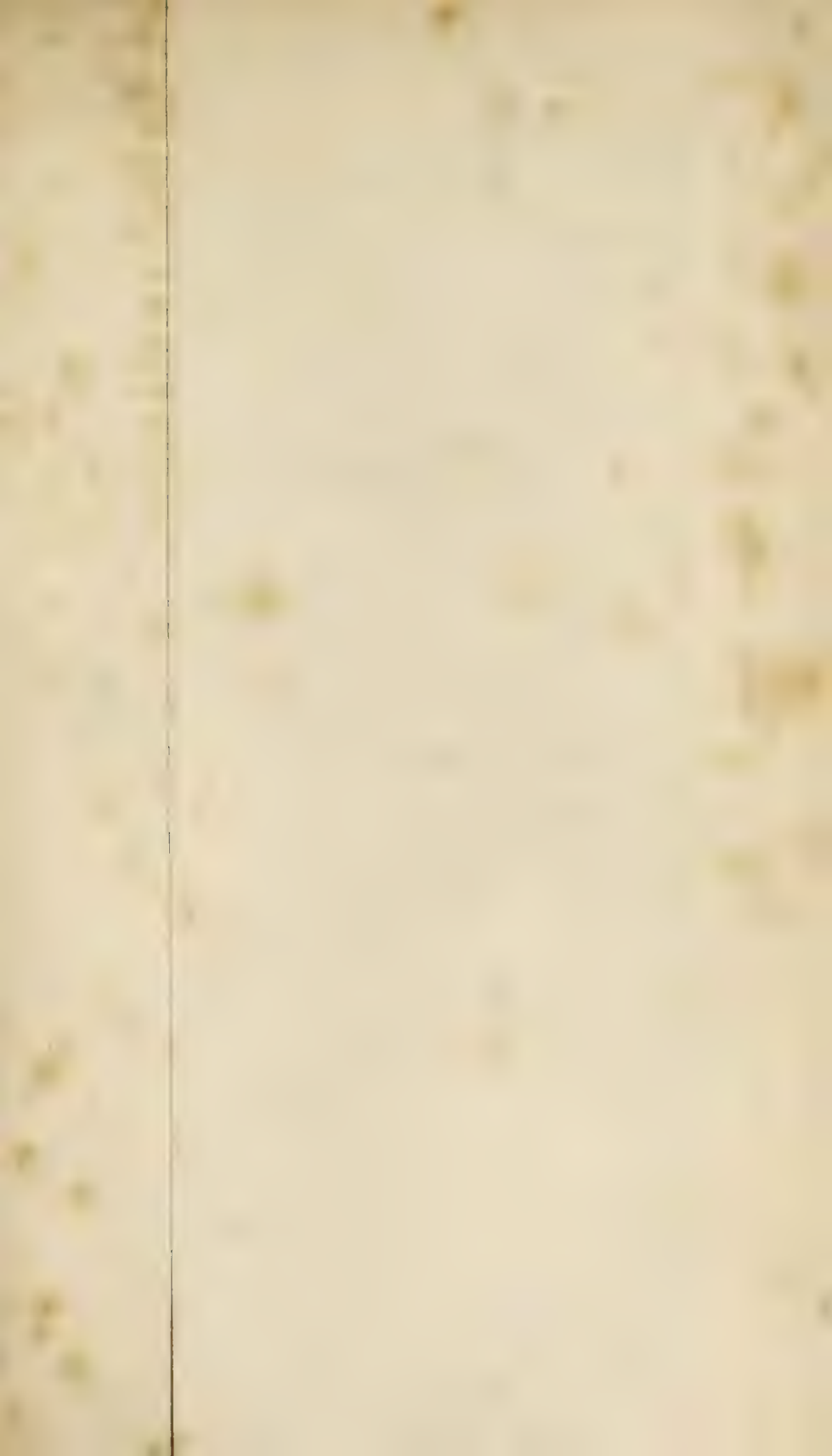
Ramis glabris, ramulis gemmulisque pilosis, foliis (deciduis?) petiolatis lato-lanceolatis sinuato-dentatis utrinque (etiam axillis) glabris, dentibus obtusis, cupulæ crassissimæ lignosæ brevi-turbinatæ inflexæ squamis arete imbricatis crassis gibbosis acutis, glandula maxima sessili globoso-subconica basi latissima convexa apice depressa umbilicata umbonata.

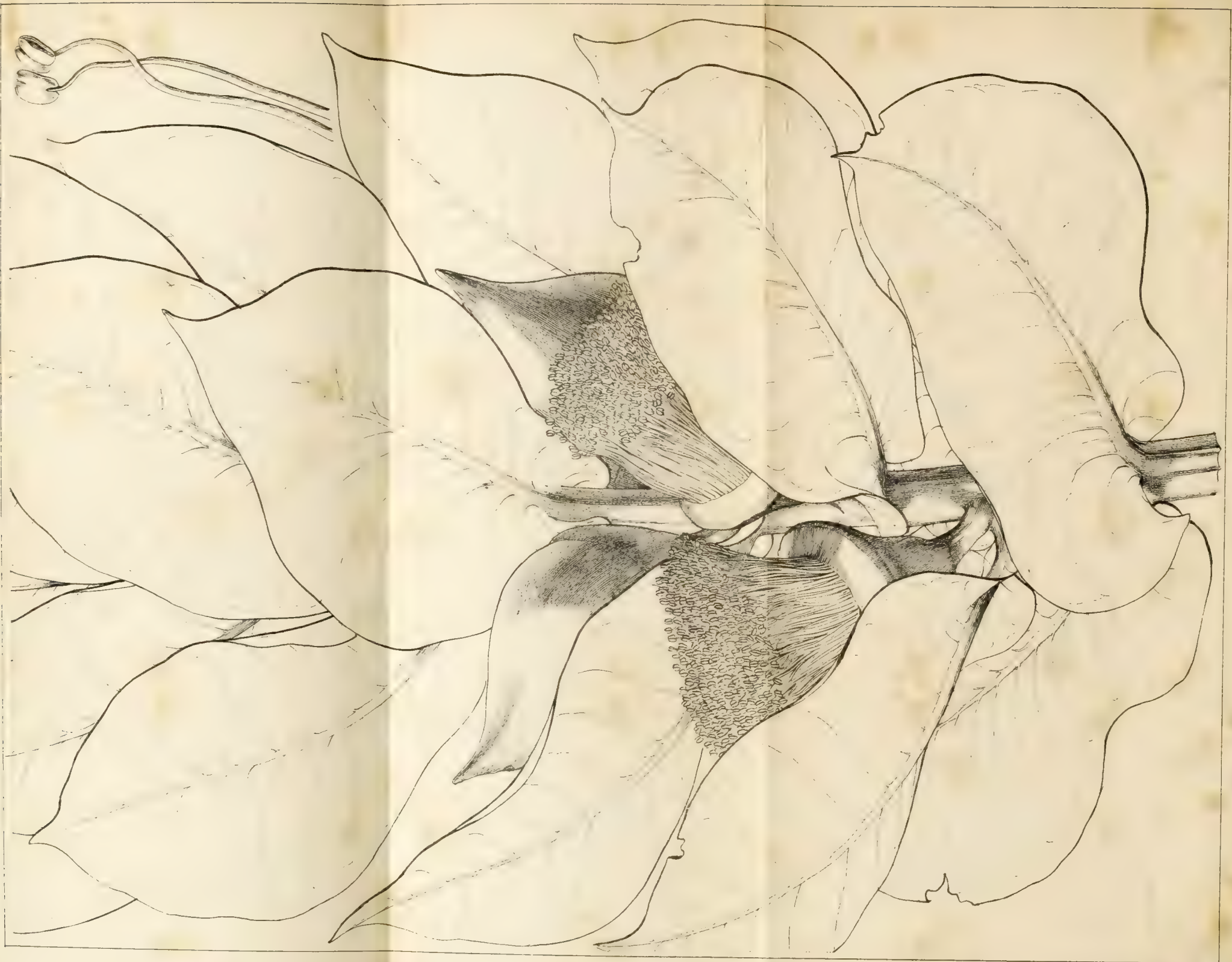
HAB. Cerro del Tamber, Guatemala, where the average temperature of the climate is 68°—69°. *G. U. Skinner, Esq.*

For the knowledge of this splendid fruited oak, which attains a height of 80 feet, we are also indebted to G. U. Skinner, Esq. The acorns are even larger than those of *Q. Skinneri*, (see our preceding plate) and the foliage and the cupula, especially, are quite different: the latter singularly rough and corrugated. Mr. Bentham observes that the cotyledons of the embryo are unequal in size and slightly uneven on the surface, but that there is nothing like the dissepiments and furrows of *Q. Skinneri*, and only a few very slightly prominent ribs on the endocarp.

Fig. 1. Acorn: nat. size.







TABS. CDV. CDVI.

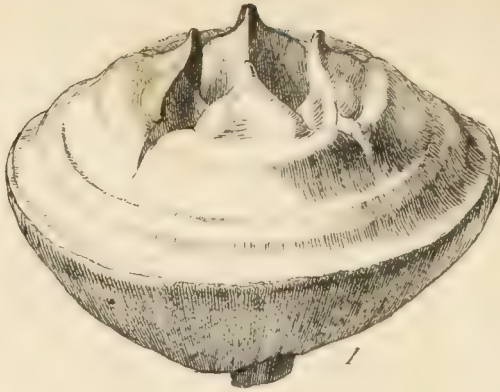
EUCALYPTUS MACROCARPA. *n. sp.*

Arbor ubique farinaceo-glaucescens, foliis cordato-ellipticis breviusculis, pedunculis axillaribus solitariis brevissimis unifloris, calycis magni crassissimi operculo conico-acuminato, capsula maxima breviter hemispherica marginata lignosa 4-5 valvi.

HAB. Guangan; Swan River Colony, Australia. *Mr. J. Drummond.*

One of the finest among the many fine plants lately sent to me by Mr. J. Drummond from the Swan River Colony, is the present new species of *Eucalyptus*. It is noticed in Mr. Drummond's letters published in the 2d vol. of our "Journal of Botany," p. 343, and subsequent pages. Guangan is the native name of a country inland from the Swan River coast, constituting an open sandy desert, commencing about eighty miles E. S. E. of Freemantle and continuing for 200 miles. This barren sandy district is bordered by a considerable forest, composed principally of two species of *Eucalyptus*, called *Urac* and *Morral* by the aborigines. The present one is the *Morral*, conspicuous by its noble, glaucous, almost white leaves, its red flowers and its fruit, both of an unusually large size. The same species, however, Mr. Drummond has seen with white flowers.

Tab. CDV. CVI. Portion of a flowering plant : *nat. size*, and stamens : *magnified*. Tab. CDVII.



Drummondianæ.

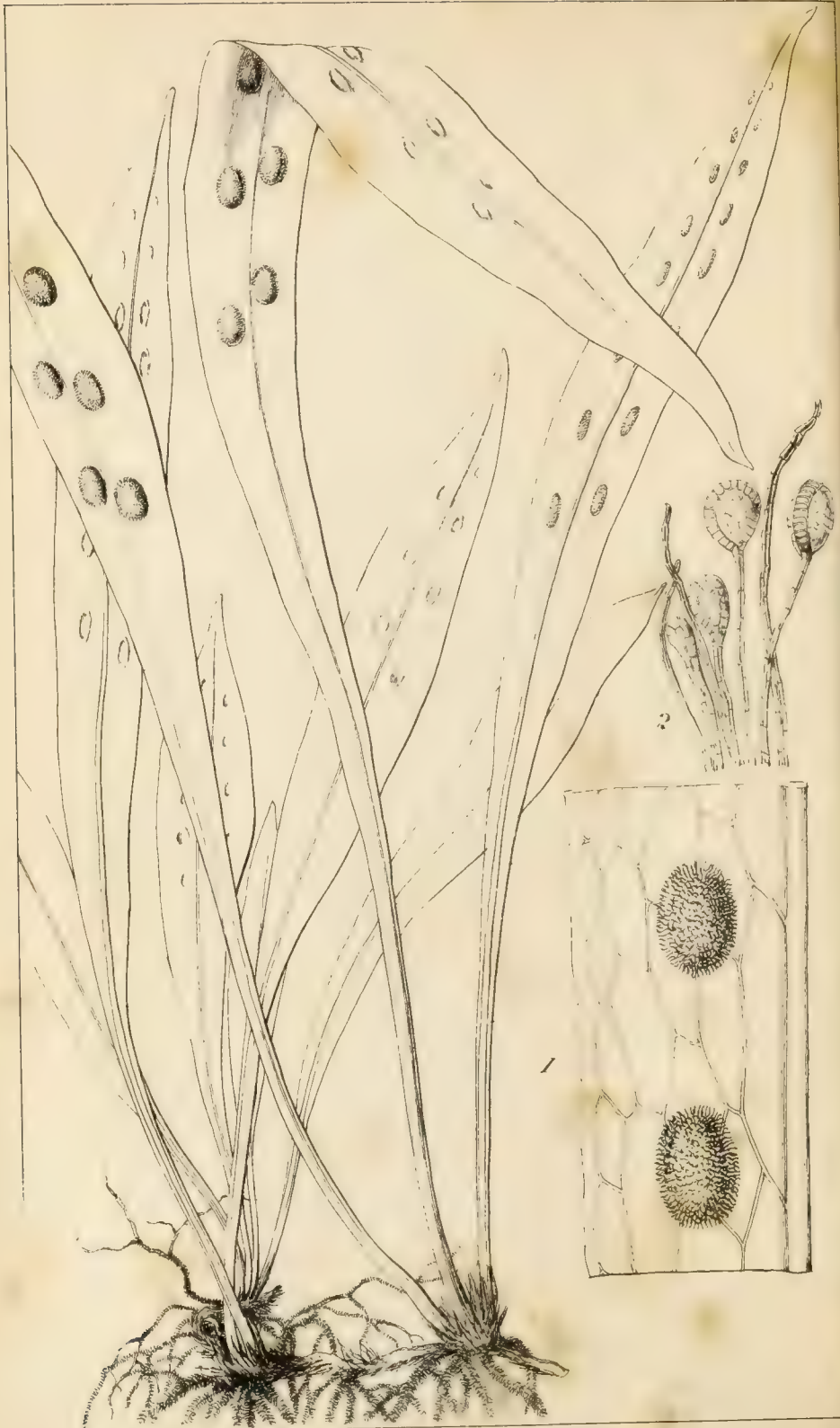
N. O. Myrtaceæ.

TAB. CDVII.

EUCALYPTUS MACROCARPA. *n. sp.*

This plate represents the fruit of *Eucalyptus macrocarpa*, of which the flowering specimen is given in the preceding table.

Fig. 1. Young fruit, with 4 valves and cells, *nat. size.* *f.* 2. Fruit more mature, bursting into 5 valves, and containing 5 cells; *nat. size.* *f.* 3. Receptacle of immature seeds from *f.* 1; *nat. size.* *f.* 5. Immature seeds; *nat. size.* *f.* 6. The same seeds *magnified.* *f.* 4. Receptacle of seeds from *f.* 2, the seeds having fallen away; *nat. size.*



TAB. CDIX.

POLYPODIUM (Dictyopteris) ATTENUATUM. *Br.*

Caudice repente radicibusque ferrugineo-tomentosis, frondibus simplicibus aggregatis submembranaceis lanceolatis costatis basi in petiolum longe attenuatis reticulatis, areolis oblongis, soris ellipticis oblongis uniserialibus anastomosi venularum insidentibus.

Polypodium attenuatum. *Br. Fl. Nov. Holl. p. 147. Spreng. Syst. Veget. v. 4. p. 56.*

P. Brownianum. *Spreng. (fide Presl).*

Dictyopteris attenuata. *Presl. Tent. Pterid. p. 194. Hook. Gen. Fil. tab. LXXI. B.*

HAB. New Holland. *Brown.* New Zealand. *All. Cunningham. Wm. Colenso, Esq.*

The nature of the venation is of the highest importance in the study of the ferns; sometimes for discriminating species, and not unfrequently, especially when combined with difference in habit, for distinguishing genera. The simply reticulated venation in this and some allied species, has induced Presl to constitute the genus *Dictyopteris*. In the present instance the sori are dense and prominent, the stalks of the sporangia very long, and they are mixed with articulated filaments or abortive sporangia.

Fig. 1. Portion of the fertile frond. *f. 2.* Sporangia and articulated filaments; *magnified.*





TAB. CDX.

WILSONIA ROTUNDIFOLIA. *n. sp.*

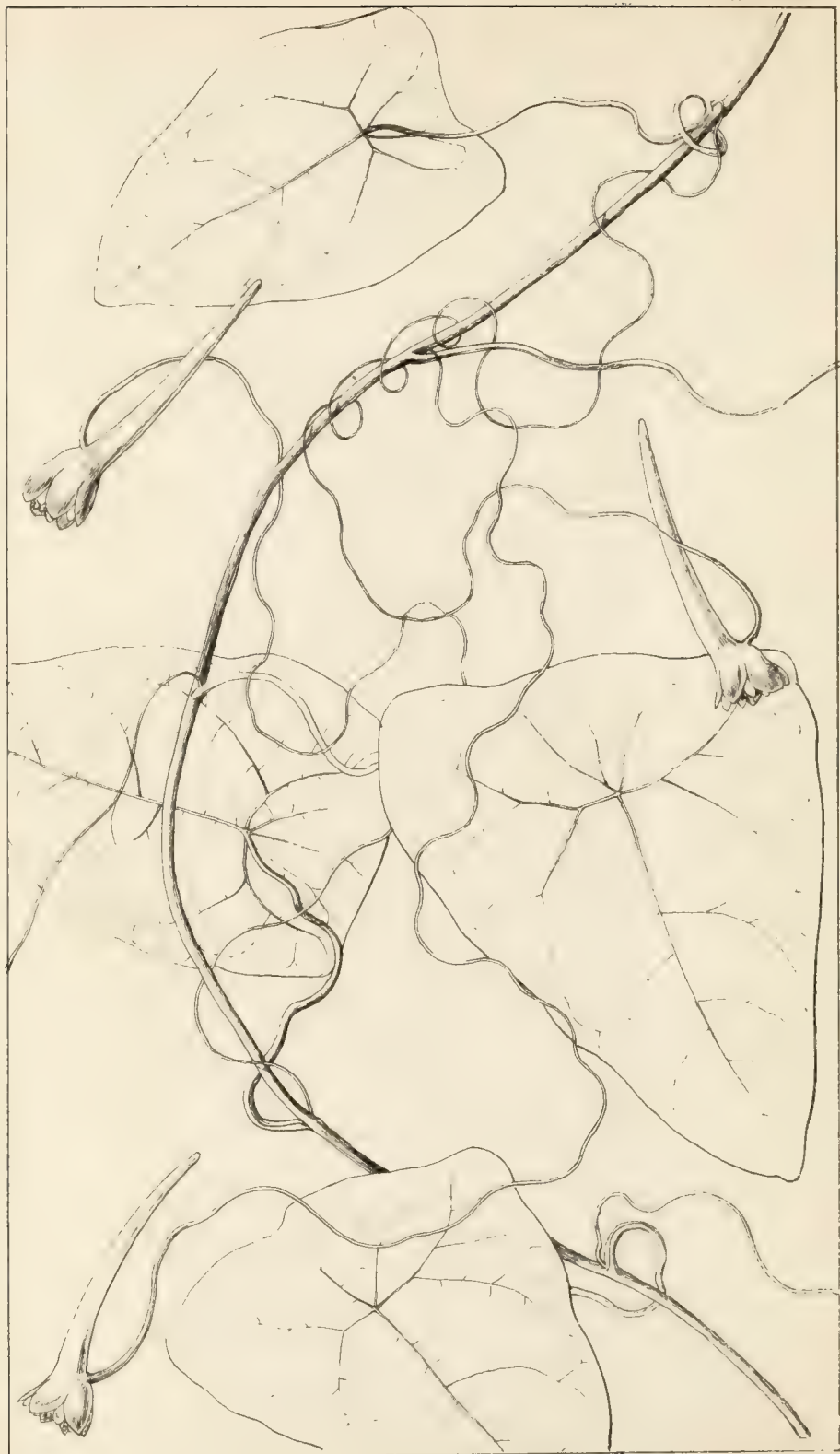
Foliis ovato-rotundatis pilosiusculis, ramis calycibusque subcylindraceis dense hirsutis, floribus axillaribus terminalibusque solitariis.

HAB. Australia, Swan River Settlement. *Mr. J. Drummond.*

I am doubtful whether to refer this little plant to Mr. Brown's genus *Wilsonia* or to *Cressa*. It has not the deeply cleft calyx of the latter, nor indeed the urceolate calyx, nor distichous leaves of the former. The true *Wilsonia humilis* of Mr. Brown is figured in our *Icones Plantarum* at *vol. 3. tab. 265.* The habit indeed of both these plants is extremely similar to that of *Frankenia*. In our plant the cells of the ovary are generally 2-seeded; but the seeds are abortive.

Fig. 1. Flower from the axil of a leaf. *f. 2.* Corolla laid open. *f. 3.* Ovary cut through vertically. *f. 4.* The same cut through transversely. *f. 5.* Anther. *f. 6.* Leaf:—all *magnified.*





Mathewsianæ.

N. O. Tropæoletæ.

TAB. CDXI.

TROPÆOLUM CIRRHIPES. *n. sp.*

Foliis deltoideis obtusangulis sublonge petiolatis peltatis, pedunculis longissimis filiformibus volubilibus, calycis limbo erecto in calcar longum subulato-cylindraceum obtusum attenuato, petalis staminibus styloque inclusis.

HAB. Chacapoyas, Andes of Peru. *Mr. Mathews.* (*n.* 3177.)

I have seen only one specimen of this most remarkable plant, which in the form of the leaf, and in the extraordinary length and slenderness of the petiole, is quite unlike any hitherto described species of the genus. The leaves too have a variegated appearance in the dried state, exhibiting whitish lines, in which the principal veins run. The calyx and short petals are yellow-green, the long spur orange-red.



TAB. CDXII.

MACROSTIGMA. nov. gen.

GEN. CHAR. Monoca v. Polygama. *Calyx* unibracteatus, monophyllus, subturbinatus, persistens, quinquelobus, lobis obtusis margine ciliatis. *Corolla* O.-HERMAPHR. *Stamina* 10 exserta, hypogyna. *Filamenta* libera, glabra. *Antheræ* filamentis longiores, oblongæ, acutæ, minute glandulosæ, biloculares, lateraliter et longitudinaliter dehiscentes. *Germen* obovatum, uniloculare, biovulatum, ovulis ad basin loculi erectis. *Stylus* basilaris, sursum curvatus, dein deflexus, germine subtriplo longior. *Stigma* maximum, peltatum, granulolum, germinis fere magnitudine.—FÆM. *Stamina* 10 abortiva, ad filamenta elongata flexuosa antheris destituta redacta. *Pistillum* ut in hermaphrodita.—Frutex erectus ramosus, ramis virgatis; foliis sparsis linearibus rigidis obtusis, basi utrinque stipula minuta brevi-subulata suffultis. Flores axillares in foliorum axillis superiorum, v. si mavis, racemosi, racemis foliosis.

Macrostigma australe.

HAB. Swan River Colony, Australia. Mr. James Drummond.

On the Natural Order to which this may be referred I will not venture to offer a conjecture, but content myself with representing such an analysis of this singular plant as my specimen will allow.

Fig. 1. Hermaphrodite flower. *f. 2.* The same, the calyx laid open. *f. 3.* Pistil. *f. 4.* Ovary laid open. *f. 5, 6.* Stamens. *f. 7.* Female flower:—*magnified.*





TAB. CDXIII.

Crossolepis pusilla Hügel.
CROSSOLEPIS? PUSILLA. Hügel.

Erecta, glomerulis oblongis basi attenuatis, capitulis bifloris.

Hügel, *Enum. Pl. Nov. Holl.* p. 61.

HAB. Swan River Colony, Australia, (Hügel), Mr. J. Drummond.

A small erect annual plant, branching from the base: the stems red, clothed with deciduous down. Leaves alternate, linear, very obtuse. Capitula terminal, collected together so as to form a dense cylindrical spike of a glossy, straw-colour, attenuated at the base. Each capitulum consists of a two-flowered involucre of three scales, of a very delicate, membranaceous reticulated texture: the outer one (comparatively) large, almost orbicular, concave, denticulate at the margin: the two inner small, boat-shaped, compressed, so as to present a flattened keel, fringed at the margin above. Within the fold of each of these small scales is a very minute tubular floret. Ovary obovate, tuberculate. Corolla funnel-shaped, widening upwards, 3-lobed. Anthers and style altogether included.

Fig. 1. Spike or glomerule of capitula. *f. 2.* Inner view of a capitulum. *f. 3.* Outer view of do. *f. 4, 5.* The two inner scales of the capitulum with the flowers. *f. 6.* floret. *f. 7.* Upper part of the corolla laid open. *f. 8.* Branches of the style: *magnified.*





TAB. CDXIV.

LACHNOSTACHYS. *n. gen.*

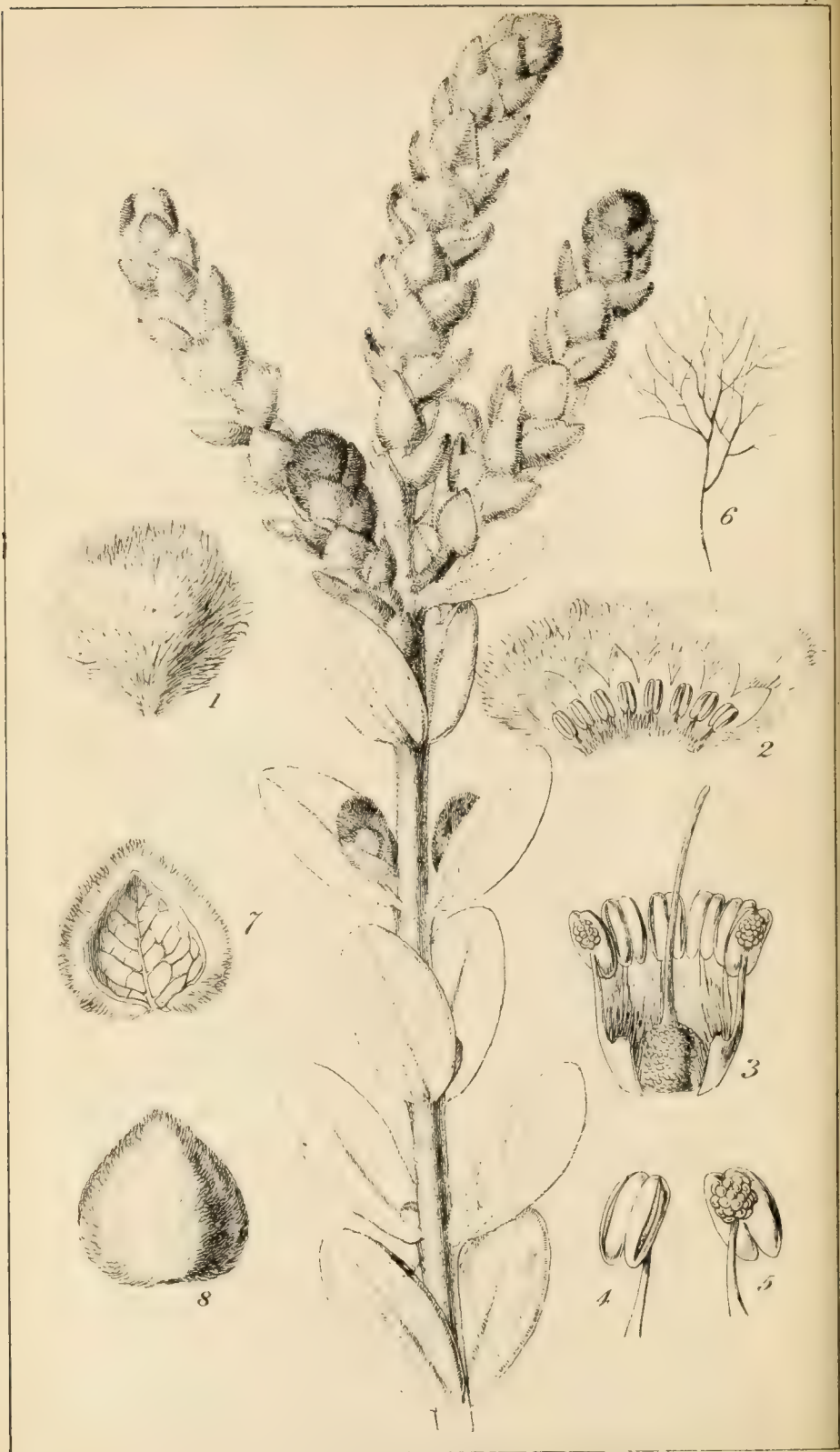
Flores hermaphroditi bracteati. *Perianthium* longissime densissimeque lanatum, monophyllum, 6-lobatum, scariosum. *Stamina* hypogyna 6-8, perianthii lobis opposita. *Filamenta* filiformia, in tubum basi vel usque ad medium connata, tubo intus villosissimo. *Antheræ* biloculares. *Ovarium* subglobosum. *Stylus* filiformis. *Stigma* obtusum.—Frutices *oræ occidentalis Novæ Hollandiæ*; *ubique tomentosæ*. *Folia opposita rigida*. *Spicæ terminales et axillares, bracteatae, cylindraceæ*. *Flores lana longissima ramosa intertexta tecti*.

Lachnostachys albicans; foliis lanceolato-ellipticis imbricatis ramisque albo-tomentosis, bracteis flore brevioribus, perianthio 6-lobo, staminibus exsertis, tubo filamentis subæque longo, ovario superne densissime piloso.

HAB. Swan River Colony, Australia. *Mr. James Drummond*.

Two very remarkable plants in Mr. Drummond's Swan River collection are those figured in the present and succeeding plate, belonging to the Order *Amaranthaceæ*; but so different from any genus known to me, especially in habit, that although my specimens are destitute of fruit, and although, on account of the singularly dense and intricate nature of the wool which covers the flowers, it is exceedingly difficult to investigate the exact structure of the minute flowers concealed within the woolly covering, I have ventured to constitute of them a new genus.

Fig. 1. Flowers. *2.* Perianth laid open, the stamens being removed. *f. 3.* Stamens. *f. 4.* Pistil. *f. 5, 6.* Anthers. *f. 7.* Small portion of wool from the perianth: all more or less *magnified*.



TAB. CDXV.

LACHNOSTACHYS FERRUGINEA. *Hook.*

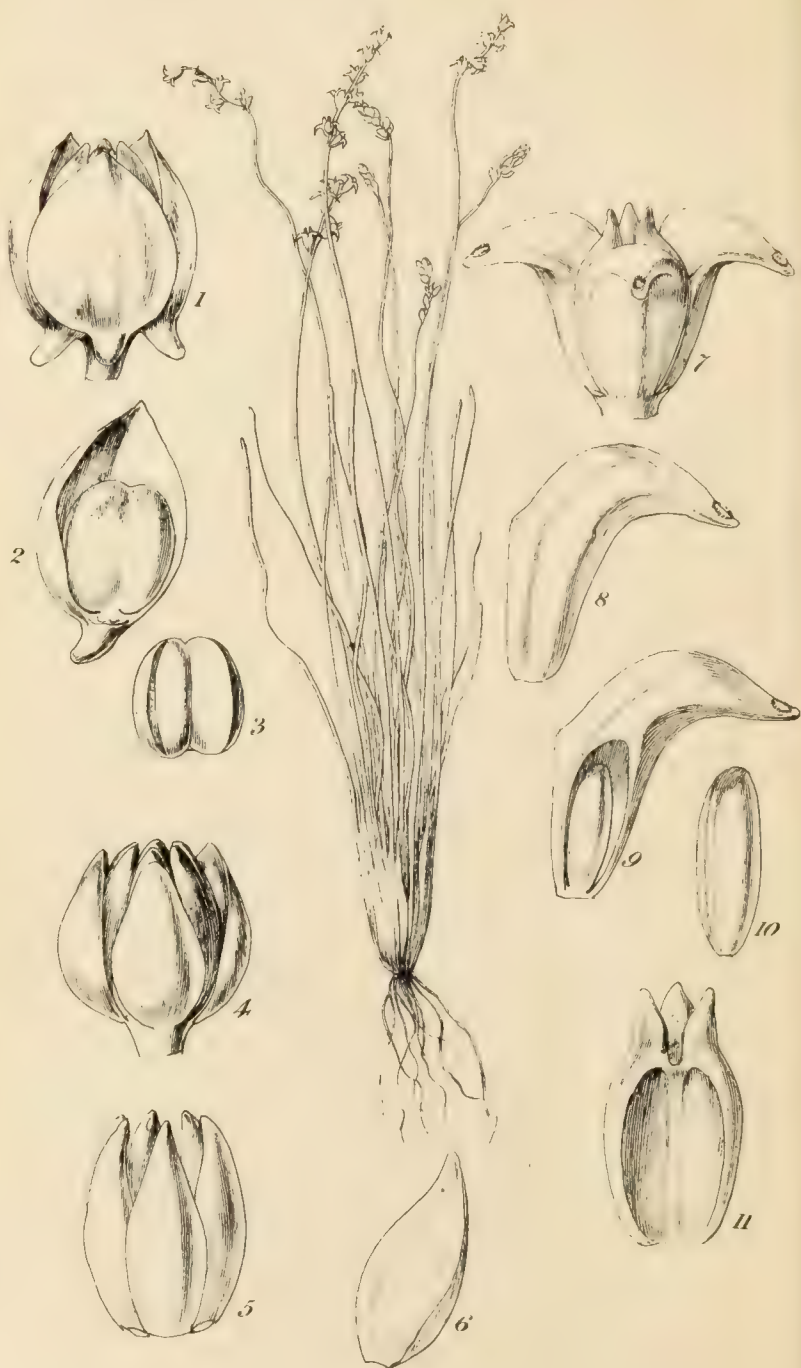
Foliis lato-ellipticis remotis ramisque dense ferrugineo-tomentosis, bracteis flores superantibus, perianthio 8-lobo, staminibus inclusis, tubo filamentis brevioris, antheris dorso tuberculato, ovario granulato.

HAB. Swan River Colony, Australia, *Mr. J. Drummond.*

It is possible that when this and the preceding plant (*L. albicans*) are better known as to the structure of their fructification, the present may be found to constitute a different but closely allied genus. The bracteas are very large and of a ferruginous brown colour, contrasting singularly with the dense white balls of wool which cover the flowers within the bracteas; the perianth has 10 lobes or segments; the stamens are 8; the tube short; and at the back of each anther is a large granulated excrescence.

Fig. 1. Flower. *f. 2.* Perianth and staminal tube laid open. *f. 3.* Stamens and pistil. *f. 4, 5.* Anthers. *f. 6.* Small portion of wool from the perianth. *f. 7.* Inner; and *f. 8,* an outer view of a bractea: all more or less *magnified.*





TAB. CDXVI.

TRIGLOCHIN? CALCARATUM. *n. sp.*

Triandrum, sepalis 3 ext. calcaratis, carpellis semiunitis, 3 ext. fertilibus apice reflexis, foliis linearibus flaccidis scapo brevioribus, floribus laxè spicatis.

HAB. Swan River Colony, Australia. *Mr. James Drummond.*

Radix fibrosa. Folia 3-5 uncias longa, linearia, flaccida, basi dilatata, membranacea. Scapi 5-6 uncias longi, graciles, flaccidi. Flores laxè spicati. Sepala 6 erecta, quorum 3 exteriora majora, lato-ovata, acuta, antherifera, basi calcarata; 3 interiora ovata, ecalcarata. Ovaria 6 ovato-acuminata, primum erecta, subæqualia, inferne coadunata: tria exteriora fertilia, demum (statu fructificante) superne reflexa, stigmatè infra apicem notata; tria interiora abortiva semper erecta. Ovulum solitarium, oblongum, erectum.

Fig. 1. Flowers. *f. 2.* Outer sepal, with its anther. *f. 3.* Front view of an anther. *f. 4.* Flower from which the 3 outer sepals are removed. *f. 5.* The pistils. *f. 6.* Inner sepal. *f. 7.* Immature fruit. *f. 8.* One of the outer carpels. *f. 9.* The same, the cell laid open. *f. 10.* Immature seed. *f. 11.* The 3 inner or abortive carpels:—all more or less *magnified*.



TAB. CDXVII.

LAWRENCIA GLOMERATA. n. sp.

Ramosissima, foliis spathulatis petiolatis superioribus sessilibus, stipulis ovatis acutis adnatis, floribus 2-3 glomeratis axillari-
bus, calyce plicato, carpellis reticulatim venosis.

HAB. Swan River Colony, Australia. Mr. James Drummond.

At Tab. CCLXI. of vol. 3 of this work, I established the genus *Lawrencia*, upon a very remarkable plant found on the northern coast of Van Diemen's Land and the opposite southern extremity of Australia, *Lawrencia spicata*. The present Swan River plant is undoubtedly a second species of the same genus.

The lower part of the stem seems to be woody, the rest herbaceous, much branched. Leaves with persistent adnate stipules, which are large and very distinct in the upper floral leaves. The flowers are axillary, glomerate; the calyx singularly plicate in the sinuses, the lobes very acute, erect. Petals acute, combined by their claws with the base of the staminal tube. The styles are 5. Carpels 5, adnate, the sides strongly reticulated. Different as the two species of *Lawrencia* are in habit from *Sida*, the structure of the flowers and fruit is nearer to that genus than I had imagined.

Fig. 1. Flower and bractæas. f. 2. Corolla. f. 3. Stamens. f. 4. Immature carpels. f. 5. Single ripe carpel. f. 6. The same laid open. f. 7. Seed. f. 9. leaf:—all more or less magnified.





TAB. CDXVIII.

OXALIS CATARACTÆ. *All. Cunn.*

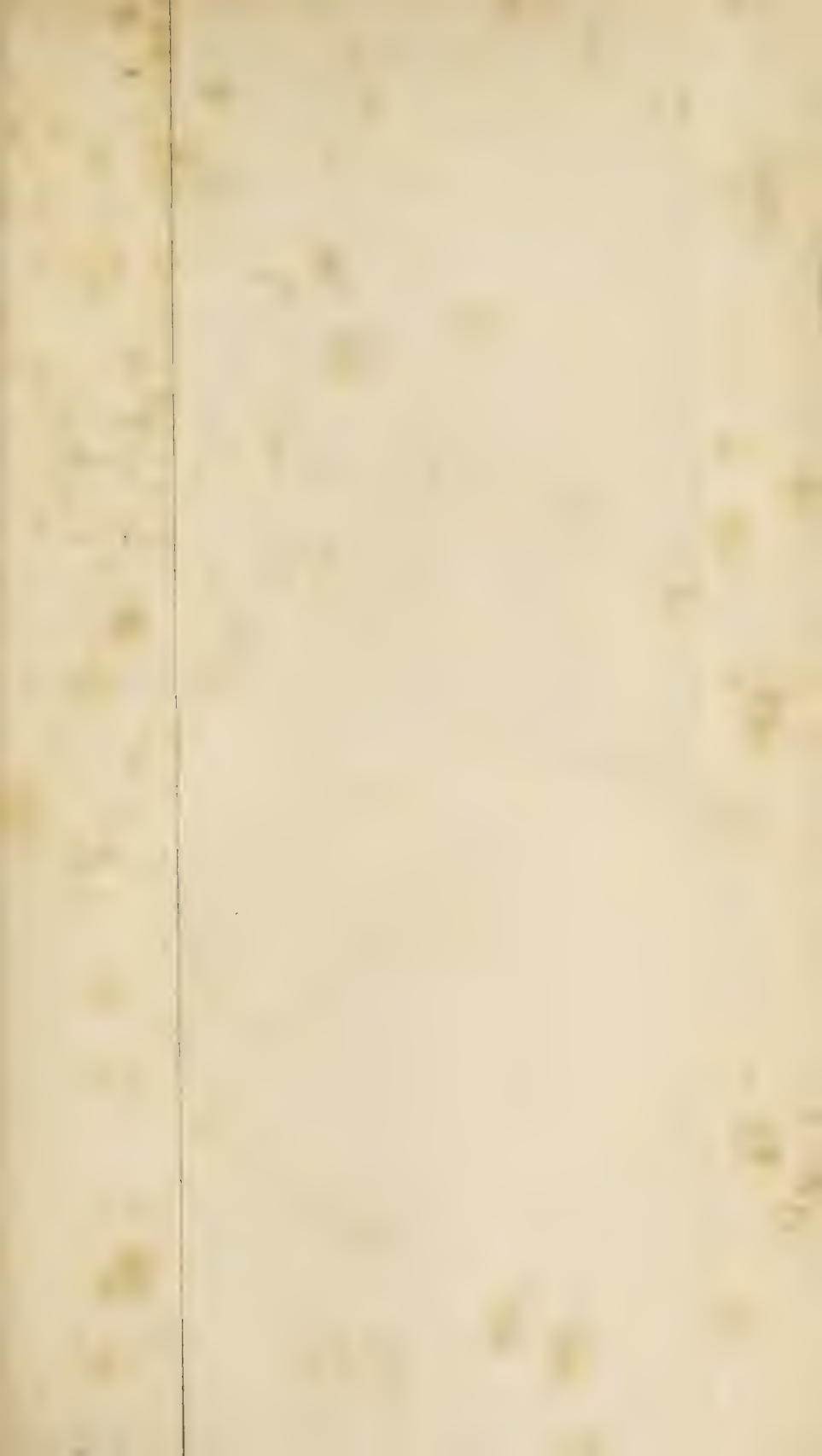
Cæspitosa ramosa decumbens, foliis longe petiolatis, foliolis sessilibus obcordato-lobatis lobis subdivergentibus, adultis utrinque caulibusque glabris venosis, subtus albido-glaucis, marginibus revolutis subintegris, petiolis (uncialibus) membranaceis basi dilatatis scariosis semivaginantibus, pedunculis elongatis unifloris petiolo longioribus pilis albidis conspersis, calycibus pilosis corolla fere triplo brevioribus. *All. Cunn.*

Oxalis Cataractæ. All. Cunn. Bot. of N. Zeal. in Ann. of Nat. Hist. v. 3, p. 315.

HAB. Northern Island of N. Zealand, on rocks beneath the great fall of the Kerri-Kerri river. *A. and R. Cunningham, W. Colenso, Esq.*

My specimens of this pretty little *Wood-sorrel* do not indeed exhibit the branching nature of the decumbent stem, but that it is the *O. Cataractæ* of Mr. A. Cunningham I cannot doubt, since it was sent me under that name, by Mr. Colenso, who gathered it in company with that lamented botanist. It is remarkable for the very large membranaceous stipules which form conspicuous sheaths around the slender stem.







TABS. CDXIX, CDXX.

VITEX LITTORALIS. *A. Cunn.*

Foliis ternatis quinatisve, foliolis ellipticis obtusis cum acumine petiolatis glabris, paniculis brevibus racemosis axillaribus terminalibusve, ramis dichotomis, calyce campanulato subdentato, staminibus exsertis, corolla extus tomentosa. *A. Cunn.*

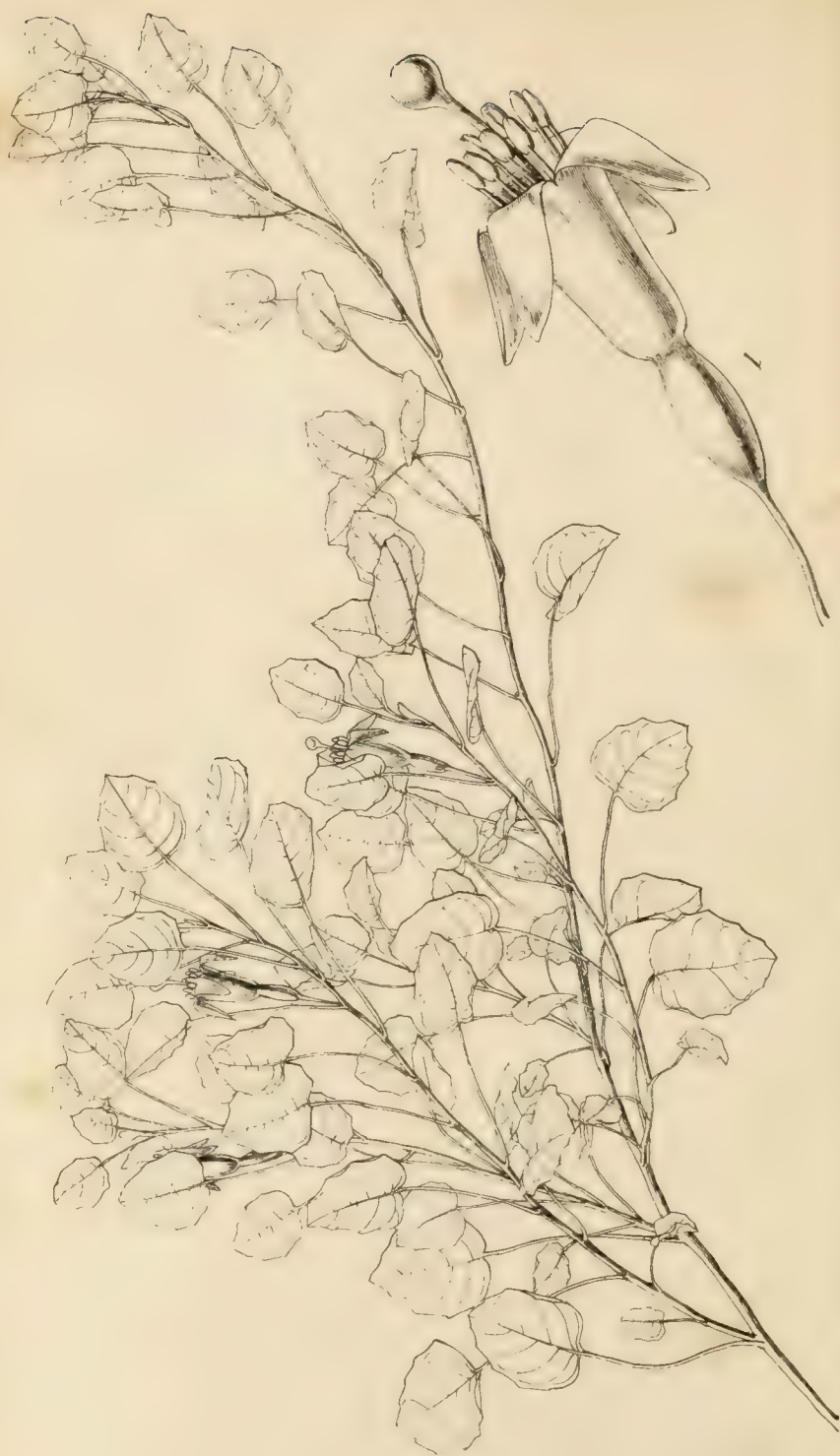
Vitex littoralis. *All. Cunn. Bot. of N. Zeal. in Ann. of N. Hist. v. 1, p. 461.*

Ephialis pentaphylla. *Banks et Sol. Mss. et Ic. ined. in Biblioth. Banks. (A. C.)*

HAB. Rocky shores of the Bay of Islands, N. Zealand, growing frequently within the range of salt water. *All. Cunningham, Mr. Colenso.*

This is described as a tree of very irregular growth, and which, from the hardness and durability of its wood, has been denominated the *New Zealand Oak*, and indeed it seems to answer all the purposes of that prince of trees. The wood is of a dark brown colour, close in the grain, and takes a good polish. It splits freely, works well, and derives no injury from exposure to the damp; twenty years' experience having proved that, in that period, it will not rot, though in a wet soil and underground. For ship-building it is, like the Teak (which belongs to the same natural order), a most valuable wood. It grows from 15 to 30 feet high without a branch, and varying from 12 to 20 feet in circumference.

Fig. 1. Flower. f. 2. Stamen. f. 3. Pistil: magnified.



TAB. CDXXI.

FUCHSIA PROCUMBENS. *R. Cunn.*

Apetala, caule procumbente, foliis parvis longe petiolatis alternis cordato-rotundatis denticulatis, pedunculis solitariis axillaribus unifloris petiolo floreque brevioribus, calycis lobis oblongis reflexis, tubo superne dilatato, staminibus exsertis, stylo stamina superante, stigmate capitato.

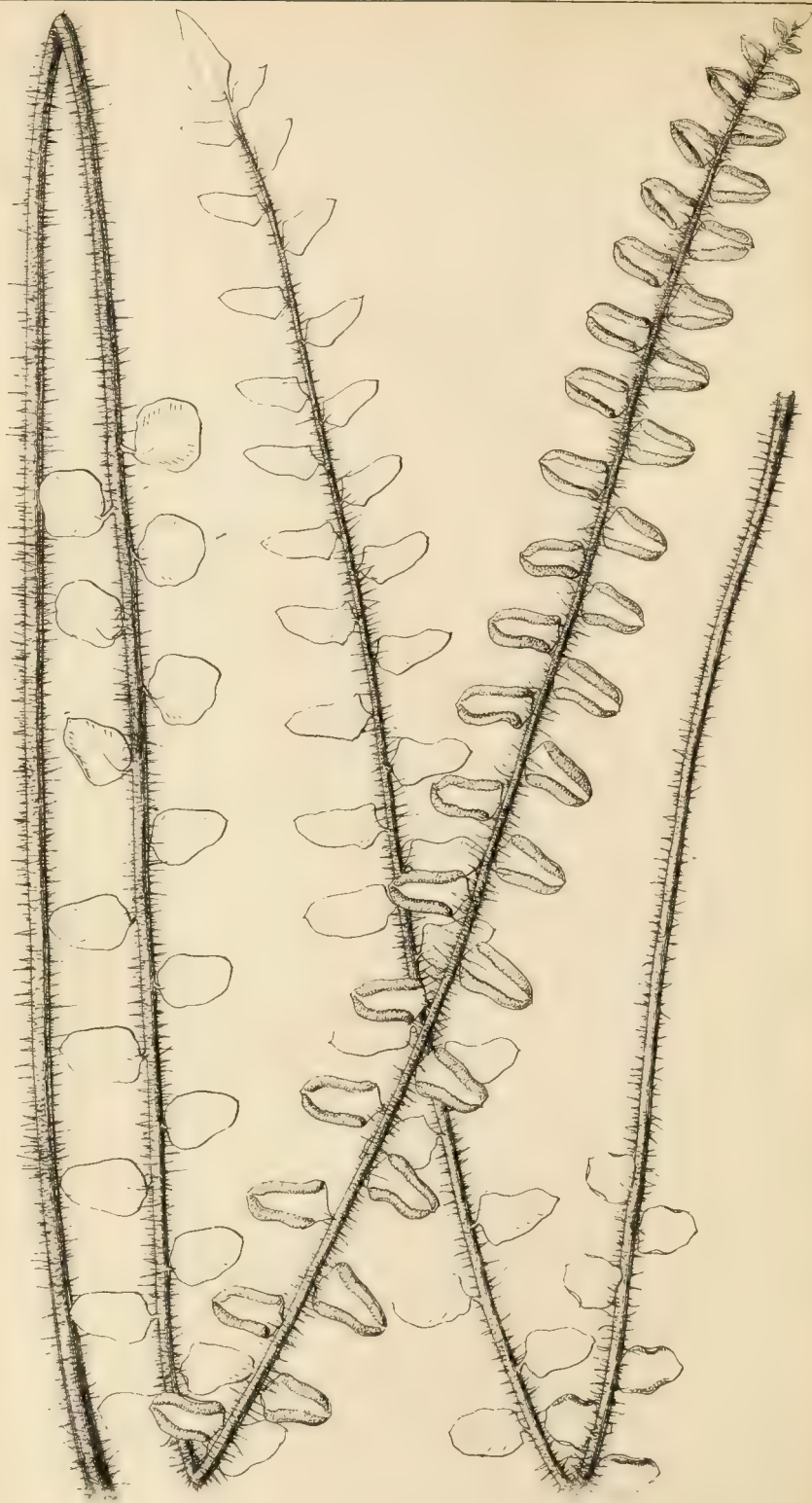
Fuchsia procumbens. *R. Cunn. mst. All. Cunn. Bot. of N. Zeal. in Ann. of N. Hist. v. 3, p. 31.*

HAB. Northern Island, N. Zealand, around the village of Matauri on the East Coast, opposite the Cavallos Isles, inhabiting the sands immediately above the range of the tide, where it was found in flower in March, 1834, by *Richard Cunningham*. Found also by *W. Colenso, Esq.* to whom I am indebted for the specimen here figured.

This is very different from the only other species of the genus yet known to inhabit N. Zealand, and from every other described one. We have seen a living plant of it in the possession of the Rev. Mr. Williams of Hendon.

Fig. 1. Flower: magnified.





TAB. CDXXII.

PTERIS (ALLOSORUS) ROTUNDIFOLIA. *Forst.*

Frondibus pinnatis, pinnis alternis obtusissimis cum mucrone glabris obsolete nervosis, superioribus ovato-ellipticis basi truncatis, inferioribus rotundatis basi cuneatis, soris latis continuis demum nudis, stipite basi scabro reliquo rachique rufo-hispidis paleaceisque.

Pteris rotundifolia. *Forst. Prodr. n.* 420. *Willd. Sp. Pl. v.* 5, 4. *p.* 563. *Sw. Syn. Fil. p.* 102 et 297. *Rich. Fl. Nov. Zeal. p.* 78. *All. Cunn. Bot. N. Zeal. in Hook. Comp. Bot. Mag. v.* 2, *p.* 355.

HAB. New Zealand, Middle Island, *Forster.* Dry forests on the banks of the Kaua-Kaua and Wycady rivers, Bay of Islands. *All. Cunningham, W. Colenso, Esq.* Astrolabe Harbour. *D'Urville.*

This beautiful plant appears to grow in tufts; the fronds, including the stipes, one and a half and two feet high. Stipes and rachis perfectly terete, red-brown, glossy; the base of the former is rough, scarcely hispid, the rest clothed with spreading ferruginous rigid hairs and scales. The pinnæ are about $\frac{3}{4}$ of an inch long, of a pale very opaque green, paler still below, and there having, generally, a line of paleaceous setæ; the rest quite glabrous and exhibiting no trace of nerves; above, in the dry state, the nerves are very indistinctly seen, pinnated on the costa and dichotomous; and it is on the branches within the margin that the sori form a continued broad line, at first covered with the marginal involucre, afterwards the involucre spreading open and exposing the sori.



TAB. CDXXIII.

ASPLENIUM BULBIFERUM. *Forst.*

Frondibus lato-lanceolatis bipinnatis, pinnis alternis lanceolatis glabris, pinnulis ovato-oblongis obtusis inciso-pinnatifidis basi attenuatis in rachi lata decurrentibus, axillis superne proliferis, laciniis integris v. bidentatis, soris in singula lacinia (pinnis inferioribus exceptis) medium versus, stipite rachique alata inferne squamulosis.

Asplenium bulbiferum. *Forst. Prodr. n.* 433. *Willd. Sp. Pl. v.* 5, *p.* 345. *Sw. Syn. Fil. p.* 84, 278. *Schkuhr, Fil. v.* 79. *Spreng. Syst. Veget. v.* 4, *p.* 89. *Rich. Fl. Nov. Zel. p.* 75. (*excl. syn. A. laxi, Br.*) *All. Cunn. Bot. N. Zeal. in Hook. Comp. Bot. Mag. v.* 2, *p.* 364.

HAB. New Zealand. *Forster.* Middle Island, Astrolabe Harbour. *D'Urville.* Northern Island; in humid woods, on the banks of the Kaua-Kaua, Bay of Islands. *All. Cunningham, Wm. Colenso, Esq.*

Our specimens are about 2 feet long. Several of the superior pinnæ, especially in the axils of the segments, bear little bulbs which exhibit themselves on the upper surface and produce young fronds while still attached to the parent.

Fig. 1. Fertile pinnule:—magnified.





TAB. CDXXIV.

COROKIA. *A. Cunn.*

GEN. CHAR. *Flores hermaphroditi* (dioici, *A. C.*) *Calycis* *tubus* elongato-turbinatus, ovario adhærens; limbo 5-fido, persistente, per æstivationem valvato. *Petala* 5, lanceolata, decidua, lobis calycis alterna, intus basi squamula fimbriata instructa. *Stamina* 5, petalis alterna, iis breviora: *Filamenta* basi dilatata: *Antheræ* lineari-oblongæ, intus rimis duabus longitudinalibus dehiscentes. *Glandulæ epigynæ* 5, laciniis calycinis oppositæ: *Ovarium* inferum, biloculare, loculis 1-ovulatis pendulis. *Stylus* staminibus brevior. *Stigma* incrassatum, bifidum. *Drupa* 2-locularis, dipyrena.—Frutex 10-pedalis, ramulis foliisque subtus albo-tomentosis. Folia alterna, coriacea, lanceolata, breviter petiolata, supra glabra, nitida, punctulata, penninervia, reticulata. Flores parvi, subpaniculati, bracteati; paniculis brevibus, axillaribus terminalibusque, undique, etiam petalis extus, piloso-canis.

Corokia buddleoides. *All. Cunn. Bot. N. Zeal. in Ann. of Nat. Hist. v. 3, p. 249.*

HAB. New Zealand, Northern Island, margins of woods on the shores of the Bay of Islands, Wangaroa, &c. *A. and R. Cunningham, W. Colenso, Esq.*

The general aspect of this plant is a good deal similar to that of *Buddlea*. Its generic name is derived from that by which it is known to the natives "Korokia-taranga." Mr. Cunningham speaks of it as diœcious. My specimens exhibited stamens in the same flower with the pistil.

Fig. 1. Portion of a leaf, upper surface. *f. 2.* Flower. *f. 3.* Petals and stamens. *f. 4.* Calyx and pistil. *f. 5.* Young fruit. *f. 6.* Ovary cut through. *f. 7.* Young fruit laid open:—magnified.



Drummondianæ.

N. O. Proteaceæ.

TAB. CDXXV.

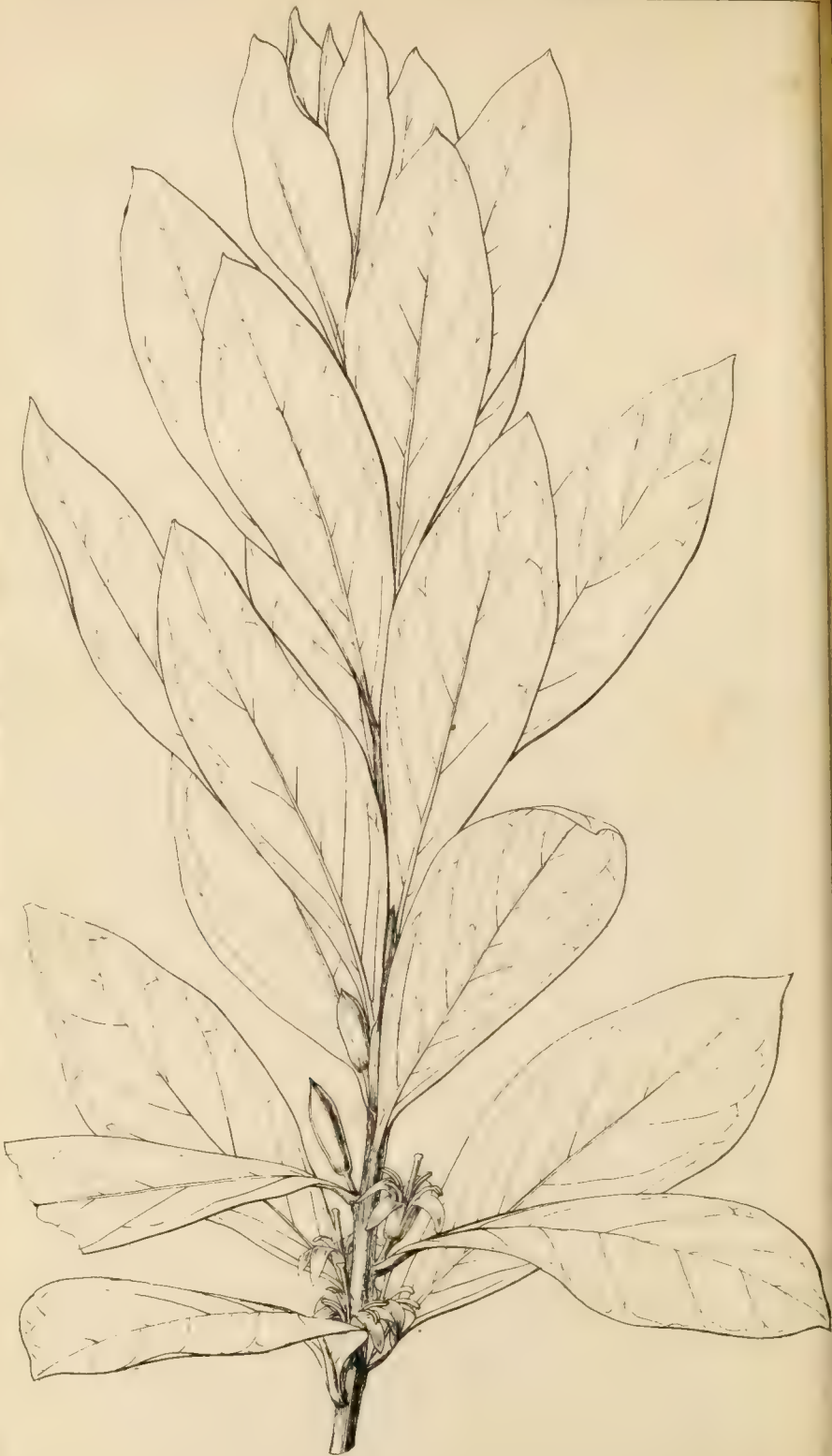
PERSOONIA QUINQUENERVIS. *n. sp.*

Ramulis foliisque junioribus alabastrisque sparse pilosulis, foliis spathulato-lanceolatis rigidis mucronatis quinquenerviis sub lente punctulis hyalinis scabriusculis, floribus solitariis erectis, antheris stigmatique obtusis.

HAB. N. Holland, Swan River Colony. *Mr. James Drummond.*

With the exception of the young shoots and the flower-buds, which are slightly hairy, the rest of the plant is quite glabrous. The flowers are axillary. Peduncles solitary, single-flowered. Sepals lanceolate, acuminate, coriaceous. Anthers and style glabrous.

Fig. 1. Leaf:—slightly magnified.



Drummondianæ.

N. O. Proteacæ.

TAB. CDXXVI.

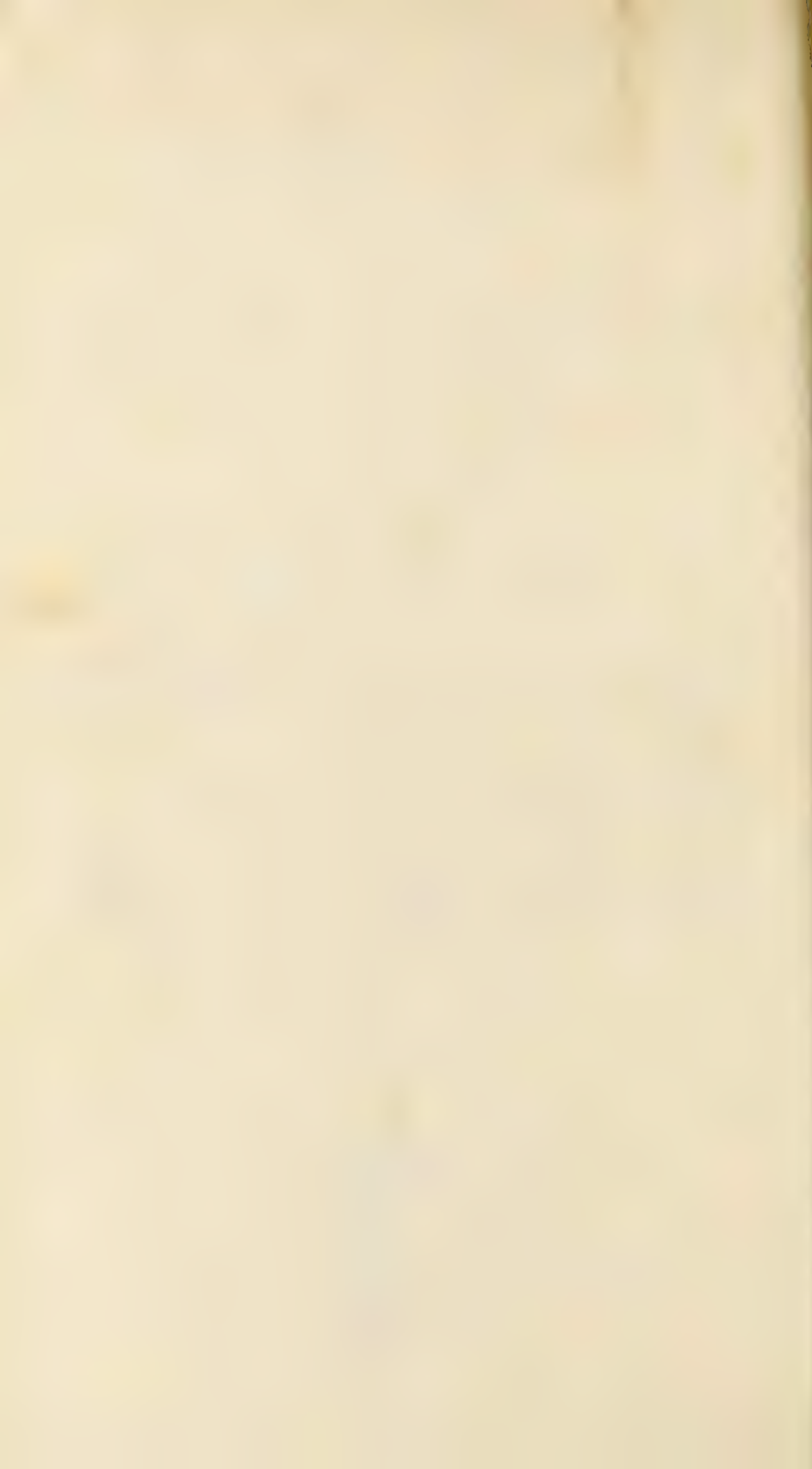

PERSOONIA LAUREOLA. *Lindl.*

Undique glaberrima, foliis late ovalibus basi angustatis obtuse mucronatis submembranaceis penninerviis, floribus axillaribus erectis, perianthiis acuminatis, antheris obtusis, stigmate dilatato.

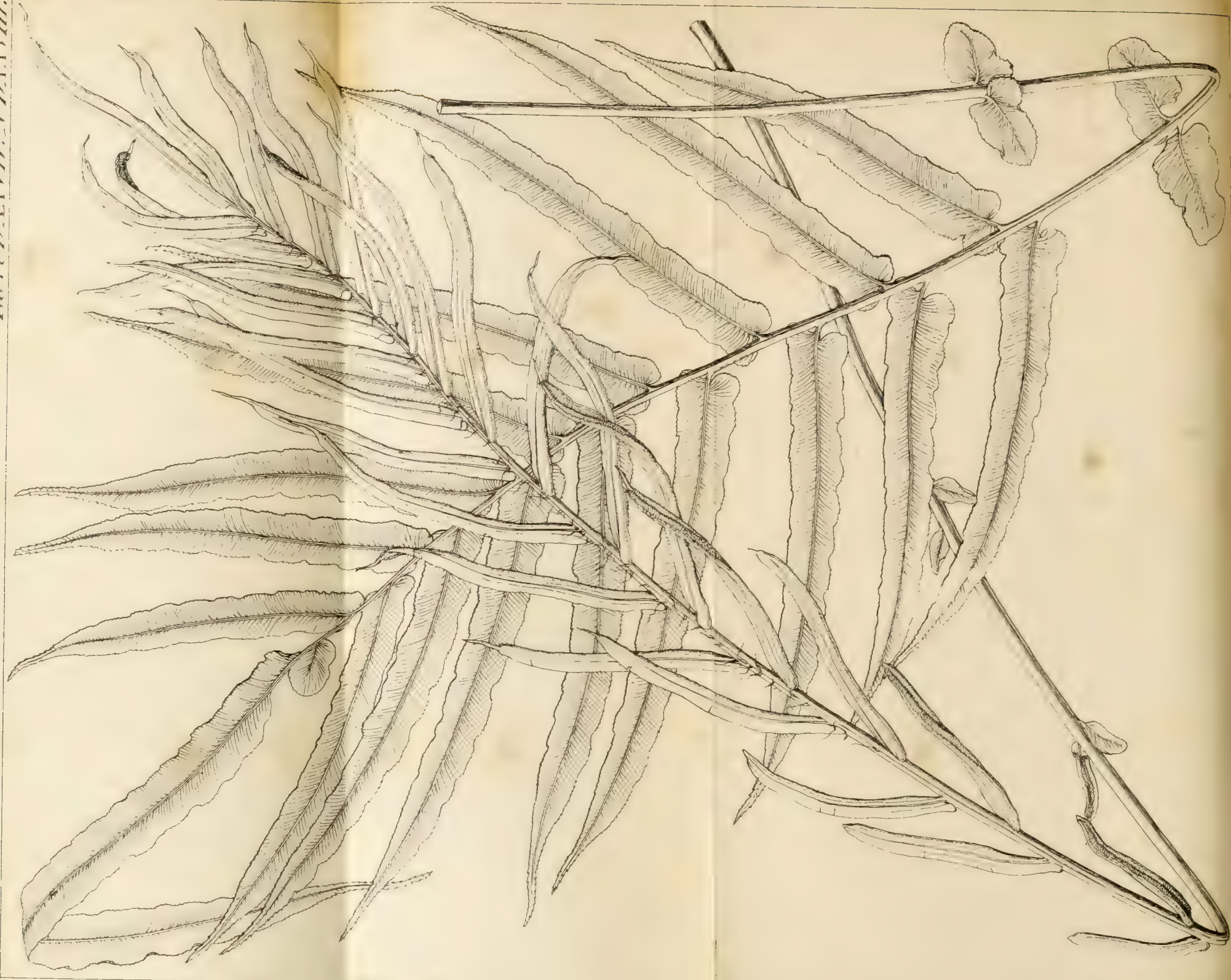
Persoonia Laureola. *Lindl. Sw. Riv. Bot. p. xxxv.*

HAB. Swan River Colony, New Holland. *Mr. Jas. Drummond.*

Allied to *P. salicina*, (Pers. and Brown), but with much broader and thinner, not inæquilateral, leaves. Dr. Lindley describes the apex of the sepals as being minutely pubescent, which is not the case in our specimens.







TABS. CDXXVII. CDXXVIII.

LOMARIA PROCERA. (*Spreng.*) var. β .

Frondibus pinnatis oblongo-ellipticis, pinnis sterilibus lanceolato-ensiformibus acuminatis serratis basi subcordatis, fertilibus (ejusdem v. diversæ frondis) linearibus costa subtus paleacea, indusiis subintramarginalibus. *Br.*

Lomaria procera. *Spreng. Syst. Veget. v. 4, p. 65. A. Cunn. Bot. of N. Zeal. in Comp. Bot. Mag. v. 2, p. 363. (excl. syn. Rich.)*

Stegania procera. *Br. Prodr. p. 153. (non Rich. Fl. Nov. Zel.)*

Blechnum procerum. *Sw. Syn. Fil. p. 115. Labill. Nov. Holl. 2, p. 97, t. 247. Willd. Sp. Pl. v. 5, p. 415.*

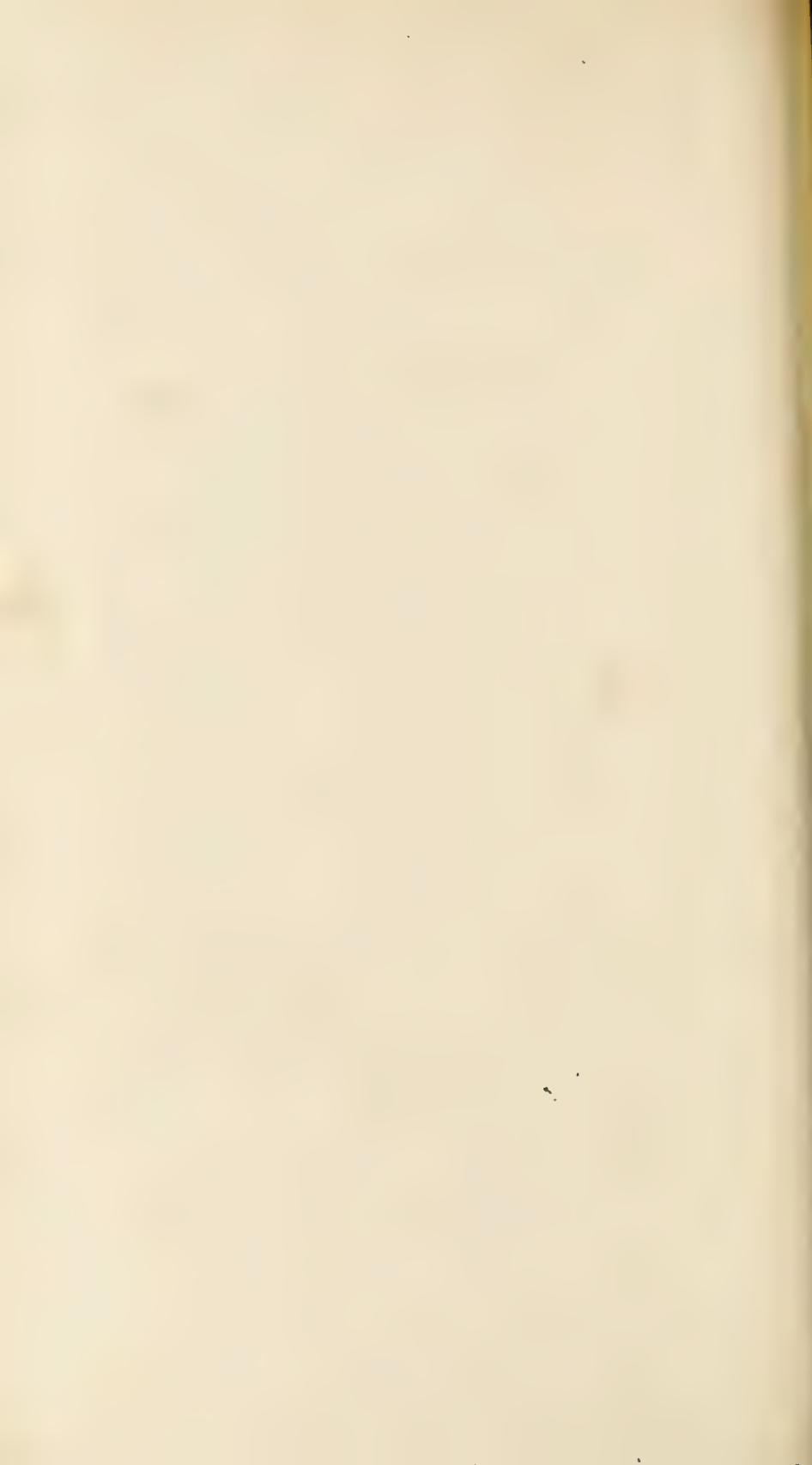
Asplenium procerum. *Bernh. Act. Erf. 1802, p. 4, f. 1.*

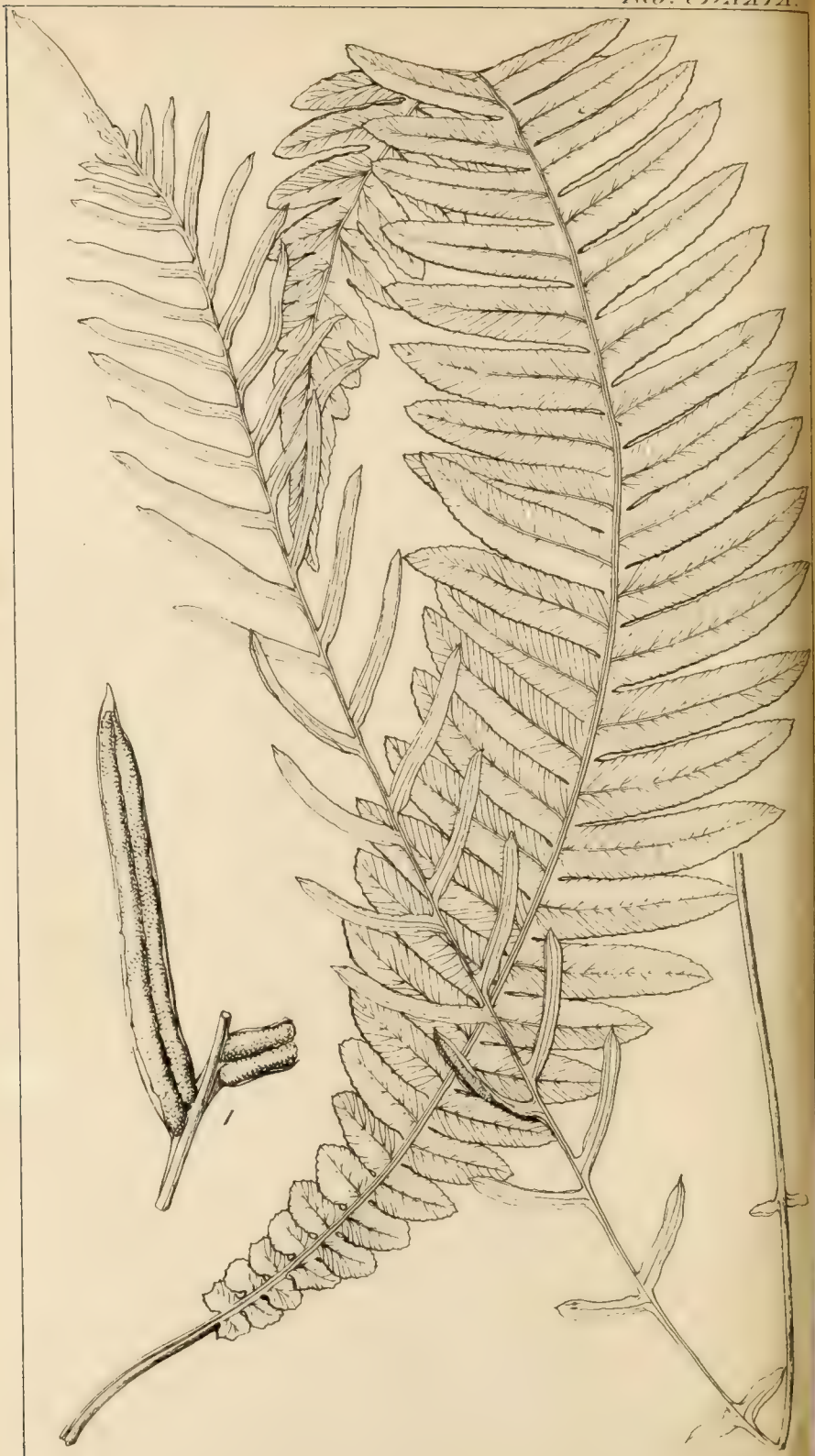
Osmunda procera. *Forst. Prod. n. 414.*

β ; pinnis sterilibus valde acuminatis, fertilibus omnibus ad basin soriferis. (TAB. NOSTR. CDXXVII. CDXXVIII.)

HAB. New Holland and Van Diemen's Land. *Brown. New Zealand. Forster. Bay of Islands, Wangaroa, &c. A. and R. Cunningham, W. Colenso, Esq.*

This appears liable to considerable variation, both in the sterile and fertile pinna. In Labillardière's plant, the former are very obtuse. In a var. mentioned by Mr. A. Cunningham, the base of the fertile pinnæ is much dilated and sterile, similar to what is figured as *Steg. procera* in *Rich. Fl. Nov. Zel. t. 13.* but the sterile frond being there pinnatifid, not pinnate, proves that that portion of the plant, at least, cannot be the same as ours.





TAB. CDXXIX.

LOMARIA LANCEOLATA. *Spr.*

Frondibus sterilibus pinnatifidis lanceolatis scaberulis laciniis approximatis oblongis obtusiusculis subfalcatis denticulatis infimis abbreviatis orbiculatis, fertilibus pinnatis, pinnis remotis linearibus longitudine fere fertilium, rachi stipiteque nudis.

Lomaria lanceolata. *Spr. Syst. Veget. v. 4, p. 62. All. Cunn. Bot. N. Zeal. in Hook. Comp. Bot. Mag. v. 2, p. 363.*

Stegania lanceolata. *Br. Prodr. p. 152. A. Rich. Fl. Nov. Zel. p. 86. Endl. Prodr. Norf. p. 81.*

HAB. Van Diemen's Land. *Brown.* Norfolk Island. (*Endlicher*). New Zealand, Bay of Islands, Kerri River and Astrolabe Harbour, Cook's Strait. *A. and R. Cunningham, Wm. Colenso, Esq. D'Urville.*

I possess the same, or a very nearly allied species, gathered by Bertero in Juan Fernandez. It scarcely differs, but in the fertile pinnæ being remarkably decurrent, so that the fertile fronds may almost be called pinnatifid.

Fig. 1. Fertile pinna:—slightly magnified.



TAB. CDXXX.

GENIOSTOMA LIGUSTRIFOLIUM. *A. Cunn.*

Fruticosum, foliis ellipticis ovatisve acuminatis subtus discoloribus, corollæ laciniis reflexis, stigmatе depresso-capitato. *A. Cunn.*

Geniostoma ligustrifolium. A. Cunn. Bot. of N. Zeal. in Ann. Nat. Hist. v. 2, p. 47.

Geniostoma rupestre. A. Rich. Fl. N. Zeal. p. 207. (non Forst).

Aspilotum lævigatum. Banks et Sol. Mss. (fide A. Cunn.)

HAB. New Zealand, Bay of Islands, in dry woods. *Sir Joseph Banks, All. and R. Cunningham, D'Urville, W. Colenso, Esq.*

Frutex, ut videtur, mediocris, valde ramosus, glaber. Rami teretes. Folia opposita, petiolata, stipulata : stipulis oppositis in vaginulam brevem intrapetiola rem unitis. Pedunculi breves, ramosi, axillares, glomerati, pedicellis bibracteatis. Calyx profunde quinquefidus, inferus, laciniis ovatis, acuminatis, patentibus. Corolla rotato-campanulata, 5-fida, laciniis patentibus vel reflexis, ovatis, intus barbatis. Stamina 5, ad faucem corollæ inserta, laciniis alterna. Filamentum brevissimum : Anthera lato-ovata. Ovarium subglobosum, biloculare ; placentis centralibus. Ovula numerosa. Stylus brevis. Stigma capitatum, medio depressum, subbifidum.

Fig. 1. Flower. f. 2. Calyx and pistil. f. 3. Stamen. f. 4. Ovary cut through transversely :—magnified.



TAB. CDXXXI.

EARINA. *Lindl.*

GEN. CHAR. *Sepala* erecta, æqualia, acuta, membranacea, carinata. *Petala* carnosae, obtusata. *Labellum* carnosum, posticum, cucullatum, trilobum, disco nudo, cum columnâ continuum et subparallelum. *Columna* teres, nana, stigmatis obliqui labio inferiore prominulo. *Clinandrium* proclive. *Anthera* bilocularis. *Pollinia* 4, preparia cohærentia, collateralia.—Herba *caulescens*; *rhizomate articulato, repente*. Folia *linearia, disticha, vaginantia*. Flores *parvi, paniculati, bracteis cartilagineis, striatis, auriculatis*. *Lindl.*

Earina mucronata. *Lindl. in Bot. Reg. sub t. 1699.*

Epidendrum autumnale. *Forst. Prodr. n. 319.*

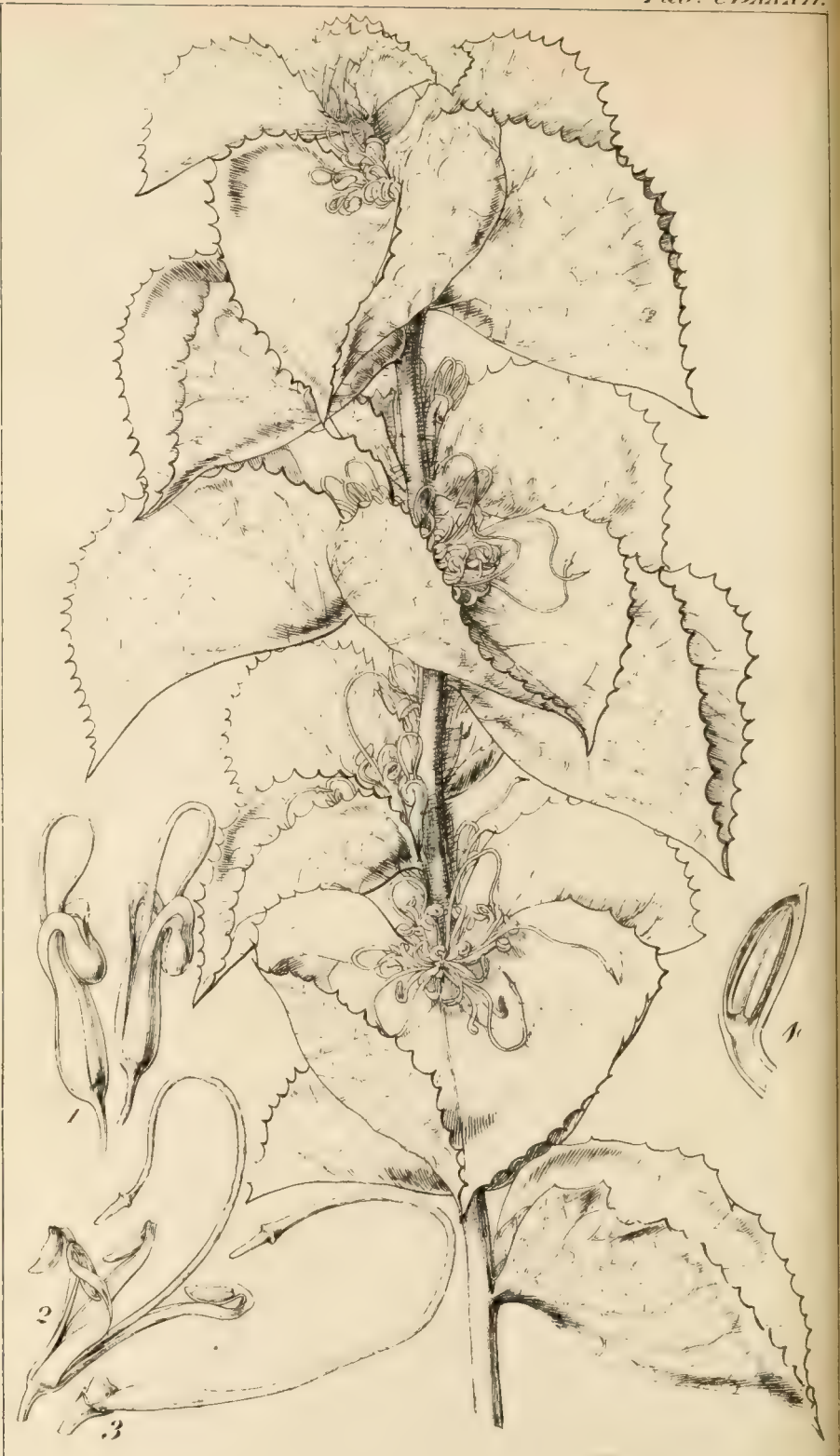
Cymbidium autumnale. *Sw. Nov. Act. Ups. p. 72. Rich. Fl. N. Zel. p. 169.*

HAB. New Zealand, Northern Island, *Sir Jos. Banks*. Moist woods, on rocks and trees, Bay of Islands, Wangaroa, &c. *A. and R. Cunningham, W. Colenso, Esq. Dusky Bay. Forster.*

I believe the general structure of the flower, as here represented, is correct; but the specimens did not allow of so accurate an analysis as I could have wished. Professor Lindley refers the genus to the group of *Malaxideæ*.

Fig. 1. Flower. f. 2. Labellum. f. 3. Column:—magnified.





Drummondianæ.

N. O. Proteaceæ.

TAB. CDXXXII.

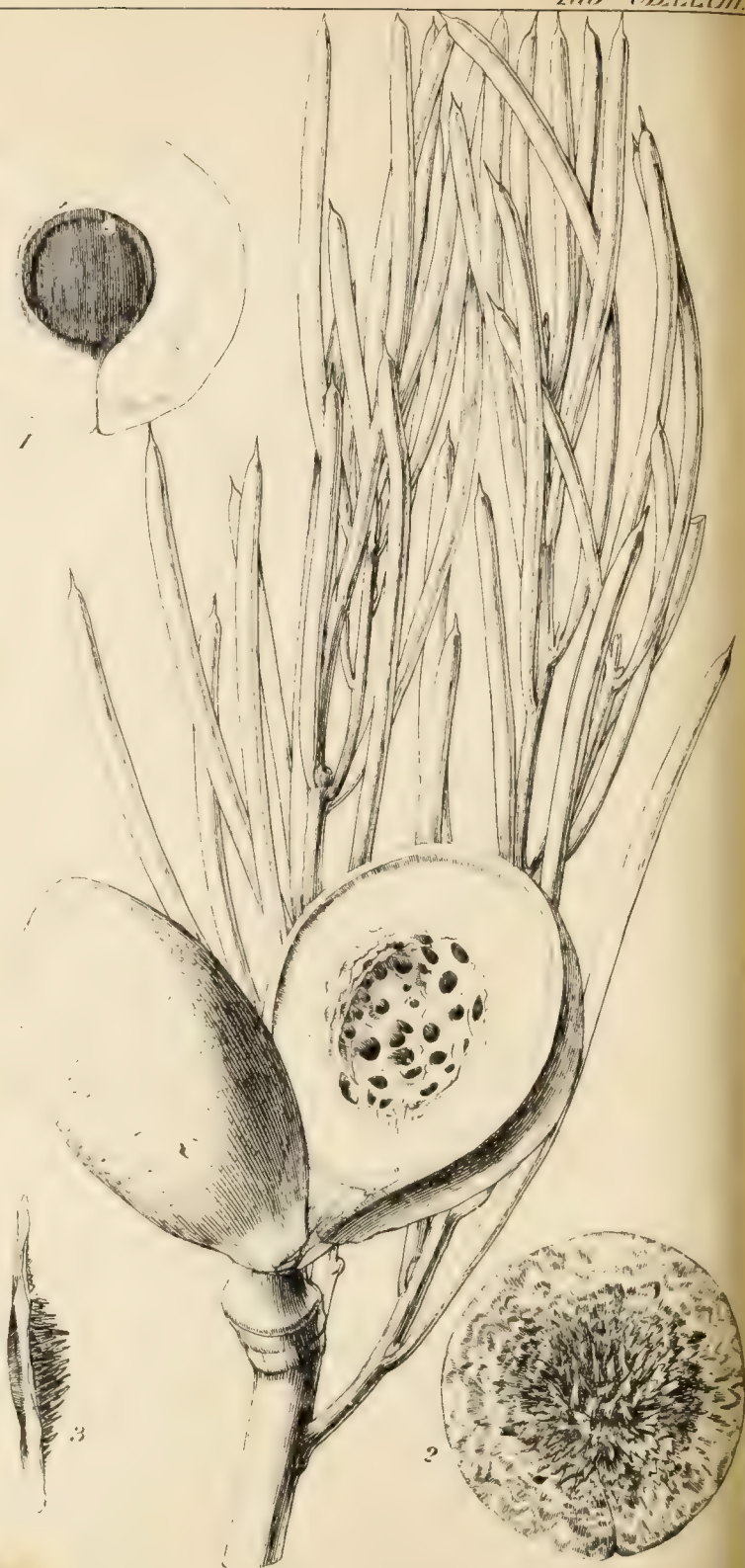
Hakea
HAKEA CONCHIFOLIA. *n. sp.*

Ramis superne dense pubescentibus hirsutissimisque, foliis reniformi-cordatis repandis spinoso-dentatis reticulatim venosis glaucis, floribus axillaribus fasciculatis.

HAB. New Holland, Swan River Colony. *Mr. Jas. Drummond.*

A species evidently nearly allied to *Hakea cucullata*, *Br. Prod. Suppl.* p. 30, detected by Mr. Baxter, at King George's Sound: but that has the leaves quite destitute of spinous teeth. The fruit I have not seen. The flowers are small, and in the dried specimens at least, concealed by the concave and almost convolute leaves.

Fig. 1. Flowers. *f. 2.* Single flower more expanded. *f. 3.* Pistil with the hypogynous gland. *f. 4.* Apex of a sepal, with the anther :—*magnified.*



TAB. CDXXXIII.

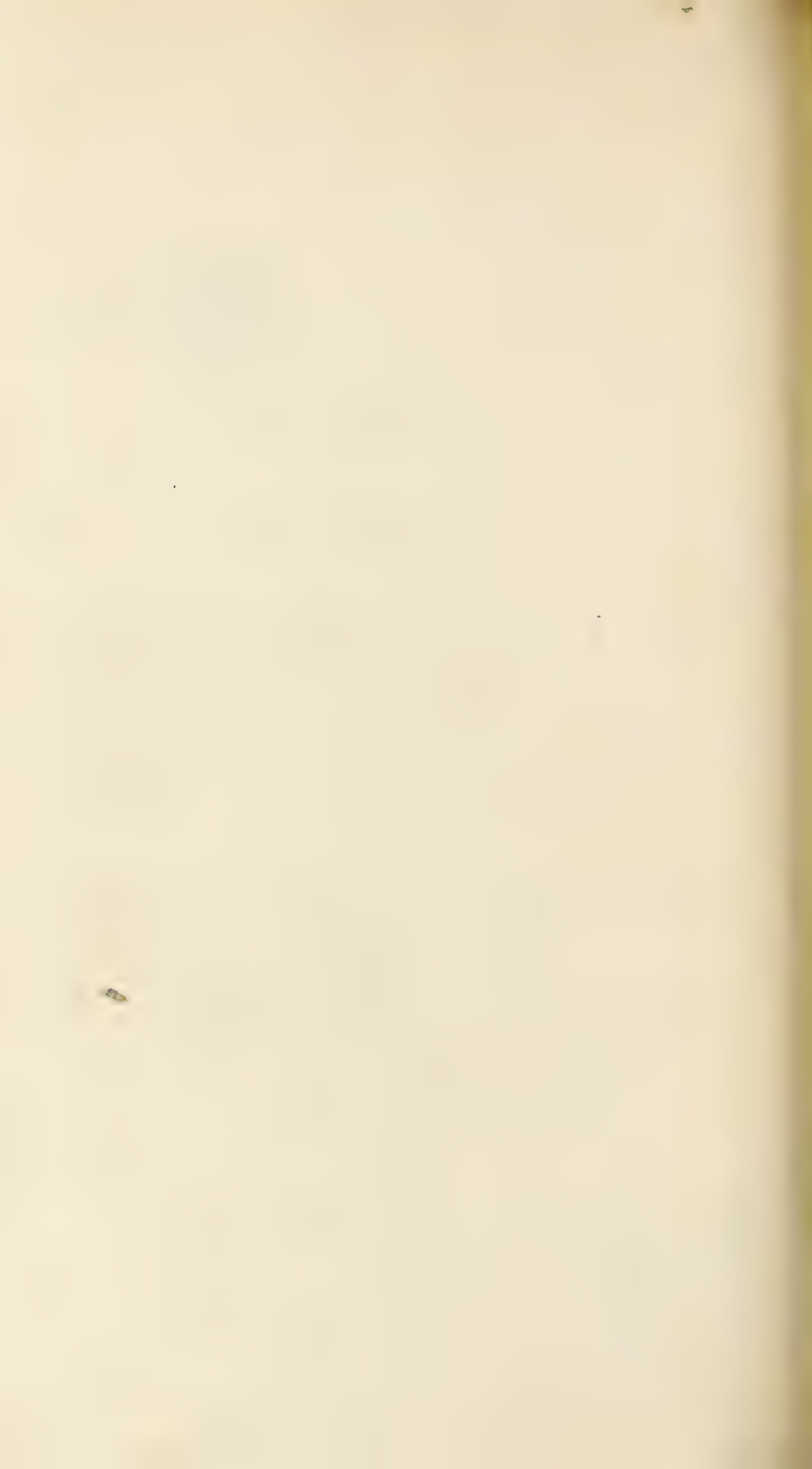
HAKEA PLATYSPERMA. *n. sp.*

Foliis tereti-filiformibus apice mucronato-spinosis, capsulis globoso-compressis ealcaratis rugosulis, valvis exacte hemisphæricis intus concavis cribrosis, seminibus orbicularibus latissime alatis hinc lævibus illinc disco muricatis.

HAB. Swan River Colony, New Holland. *Mr. Jas. Drummond.*

The fruit, perhaps, of the *Hakeæ* in general, will be found to afford excellent characters for distinguishing the species: and here the capsule is very remarkable and very much resembling castanets. Each valve is hemisphærical, concave within, and there having several irregular openings, 2 or 3 lines deep: these are occupied by the spine-like processes of the back of each seed: and these seeds are so large as to fill the whole area of the valves.

Fig. 1. Inner view of a seed. *f. 2.* Outer view of do. showing the muricated disk. *f. 3.* Side view of a seed, showing the smooth *inner*, and the muricated disk of the *outer* surface:—*nat. size.*





Baxterianæ.

N. O. Proteaceæ.

TAB. CDXXXIV.

HAKEA PANDANICARPA. *Br.*

Foliis integerrimis oblongo-linearibus basi attenuatis immerse nervosis aveniis apiculo sphacelato, capsulis gibbosis obovatis tessellatis tuberculis conicis, seminibus undique alatis. *Br.*

*Hakea pandanica*rpa. *Br. Prodr. Suppl. p. 29.*

HAB. Between Cape Arid and Lucky Bay, South shores of N. Holland. *Mr. Baxter.*

This is very appropriately named by Mr. Brown, from the resemblance of its fruit to that of a *Pandanus* (Screw Pine). I have not seen the flowers, nor does it appear that they were discovered.





Baxterianæ.

N. O. Proteaceæ.

TABS. CDXXXV. CDXXXVI.

HAKEA TRICOSTATA. Br.

Ramis gemmisque tomentosis, foliis oblongis obtusis mucronatis grosse trinerviis venosis marginatis inferne attenuatis junioribus sericeis, capsulis erectis ovatis acuminatis ecalcaratis tuberculatis, pedunculo fructifero brevi superne incrassato.

HAB. King George's Sound. *Mr. Baxter.*

I do not find any species in Mr. Brown's Prodrömus (including the Supplement) which accords with this. The leaves are 5-7 inches long, thick and hard. In the axils of the upper ones are the floriferous gemmæ. Lower down are the ripe capsules, scarcely an inch long, with a short thickened peduncle, and beset with small scattered dark-coloured warts.



TAB. CDXXXVII.

HAKEA HETEROPHYLLA. *n. sp.*

Foliis mucronatis tereti-filiformibus compressis hinc sulcatis simplicibus vel bi-trifurcatis, aliis ovali-spathulatis planis, gemmis floriferis terminalibus, capsulis deflexis oblique ovatis compressis tuberculatis in ramis brevibus terminalibus.

HAB. Swan River, New Holland. *Mr. Fraser.*

There are only three species in that division of *Hakea* to which this plant belongs, "*Folia plura filiformia : aliqua plana.*" Two of them are from the south coast of New Holland, but neither agrees precisely with the present, which has three very distinct forms of leaf; 1. tereti-filiform, compressed, with a groove on the upper side; 2. more compressed, and bi-trifurcate or subpinnatifid; 3. shorter, broadly spathulate and quite entire. The floral gemmæ are on short, patent branches, and the capsules are also terminal on the older and thicker ones.





TAB. CDXXXVIII.

ISOPOGON AXILLARIS. *Br.*

Foliis cuneato-lingulatis mucronulatis, capitulis axillaribus paucifoliis, bracteis involucrantibus ovatis imbricatis, perianthii laminis longitudinaliter barbatis, stigmate fusiformi. *Br.*

Isopogon axillaris. Br. Linn. Trans. v. 10. p. 74. Prodr. p. 367.

HAB. South coast of New Holland. *R. Brown, Esq. King George's Sound. Fraser.*

This, in its inflorescence, differs considerably from the greater number of species of *Isopogon*. Here the flowers are axillary and lax. Each segment of the perianth, too, has a beautiful tuft of white silky hairs, and the stigma is fusiform.

Fig. 1. Flower. f. 2. Pistil. f. 3. Apex of a segment of the perianth: magnified.







Baxterianæ.

N. O. Proteaceæ.

TABS. CDXXXIX. CDXL.

HAKEA BAXTERI. *Br.*

Foliis flabellato-cuneatis apice rotundato multidentato lateribus integerrimis, adultis glabris immerse venosis, capsulis ecalcaratis gibbosis. *Br.*

Hakea Baxteri. Br. Prodr. Suppl. p. 28.

HAB. New Holland, King George's Sound. *Mr. Baxter.*

Nothing can be more singular than the varied form of the fruit and foliage of the genus *Hakea*, of which numerous species exist on the south and south-western shores of Australia. The present has beautifully fan-shaped leaves, but of a singularly thick and coriaceous character.



Baxterianæ.

N. O. Proteaceæ.

TAB. CDXLI.

HAKEA CUCULLATA. *Br.*

Foliis integris subrepandis cucullatis reniformi-cordatis acutiusculis nervosis reticulato-venosis, capsulis ecalcaratis. *Br.*

Hakea cucullata. *Br. Prodr. Suppl. p. 30.*

HAB. New Holland, King George's Sound. *Mr. Baxter.*

The affinity of *H. conchifolia* to this has been already noticed, under our Tab. 432. The fruit only appears to have been discovered of this species.



TAB. CDXLII.

HAKEA INCRASSATA. *Br.*

Foliis integerrimis anguste lanceolatis obsolete 3 (-5)-nervibus apiculo sphacelato, capsulis refractis obovatis (seu obovato-globosis rima longitudinali) gibbosis lævibus ecalcaratis apiculo adscendenti, (pedunculo ramoque fructifero infra capsulam crassissimis). *Br.*

Hakea incrassata. Br. Prodr. Suppl. p. 29.

TAB. New Holland, Swan River Colony. *Mr. Fraser*, (fruit.)
Mr. Jas. Drummond, (flower.)

My fruiting specimen is from Mr. Fraser, to whom Mr. Brown attributes the discovery of this species. But the most remarkable peculiarity about it is the thickening of the fruit-stalk and of the portion of the branch below it, whence I apprehend Mr. Brown's specific name is derived. What I take to be the same species from Mr. Drummond is in flower. The flowers very small, axillary, clustered, downy.



TAB. CDXLIII.

HAKEA CRISTATA. *Br.*

Foliis cuneato-obovatis spinoso-dentatis immerse venosis ramulisque glaberrimis, capsulis bicristatis, cristis inciso-dentatis. *Br.*

Hakea cristata. *Br. Prodr. Suppl. p. 28.*

HAB. New Holland, Swan River Colony. *Mr. Fraser. Mr. Jas. Drummond.*

The leaves are glaucous, peculiarly harsh and rigid, the bark dark brown, slightly pruinose in the younger branches.

I possess a flowering specimen from the Swan River, with leaves almost twice the size of this, and much broader; the spines more distant, and the bark much paler and redder. The flowers are very small, arising from the axils of deciduous scales (of which the gemmæ are seen in our figure), thus forming a short raceme, of which the axis, or peduncle, is clothed with silky wool.



Fraserianæ.

N. O. Proteaceæ.

TAB. CDXLIV.

HAKEA STENOCARPA. *Br.*

Foliis integerrimis linearibus apiculo acuto sphacelato marginatis uninerviis, venis obsoletis, capsulis lineari-subulatis falcatis ecalcaratis. *Br.*

Hakea stenocarpa. *Br. Prodr. Suppl. p. 29.*

HAB. New Holland, Swan River Colony. *Mr. Fraser.*

This is remarkable for the long and much acuminate capsules, and the strong margin and costa to the narrow leaves.

Fig. 1. Portion of a leaf :—*magnified.*



Baxterianæ.

N. O. Proteaceæ.

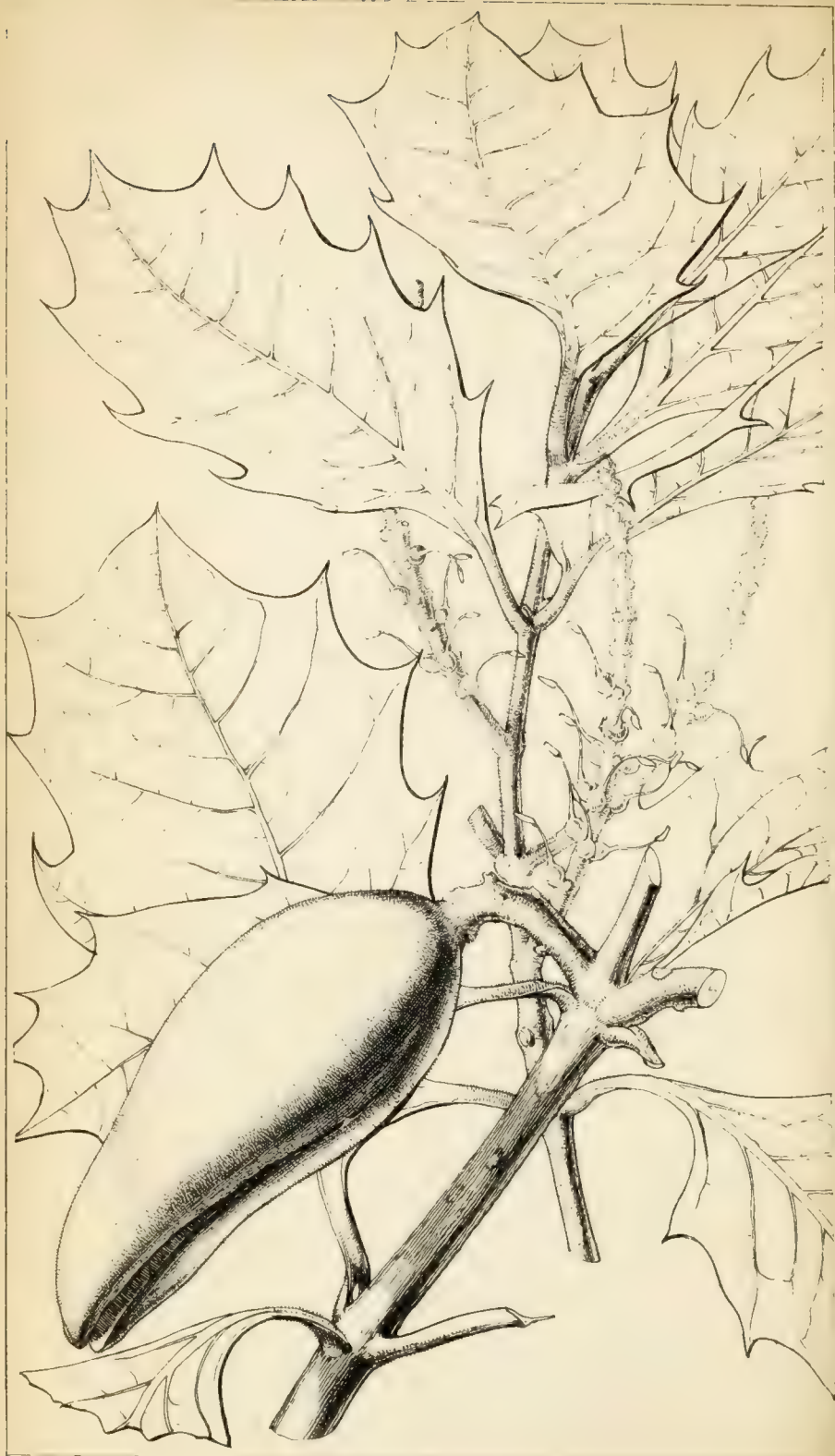
TAB. CDXLV.

HAKEA INTERMEDIA, n. sp.

Foliis circumscriptione ovali-oblongis basi cuneatis marginibus grosse spinoso-dentatis nitidiusculis obscure penninerviis, ramis ferrugineo-tomentosis, capsulis ovatis acuminatis gibbosis apice compressis bicalcaratis intus lævibus.

HAB. King George's Sound. *Mr. Baxter.*

A copiously branched plant with crowded foliage. It appears to be intermediate between *H. ilicifolia* and *H. nitida*, Br., having the downy branches of the former, and the fruit, internally smooth, like the latter.



TAB. CDXLVI.

XYLOMELON OCCIDENTALE. *Br.*

foliis subellipticis, inferioribus rami floriferi passim dentatis, superioribus integerrimis, paginis omnium subsimilibus opacis utriusque epidermide glandulifera, perianthiis extus rachique tomento appresso incanis, stylo floris hermaphroditi longitudinaliter lanato. *Br.*

Xylomelon occidentale. *Br. Prodr. Suppl. p. 31.*

[TAB. Baie de Géographe, South-western shores of New Holland. *Mr. Fraser.* Swan River Colony. *Mr. Jas. Drummond.*

This is a second species of *Xylomelon*, described by Mr. Brown; the original *X. pyriforme* seems to be confined to the Eastern coast.



TAB. CDXLVII.

HAKEA UNDULATA. *Br.*

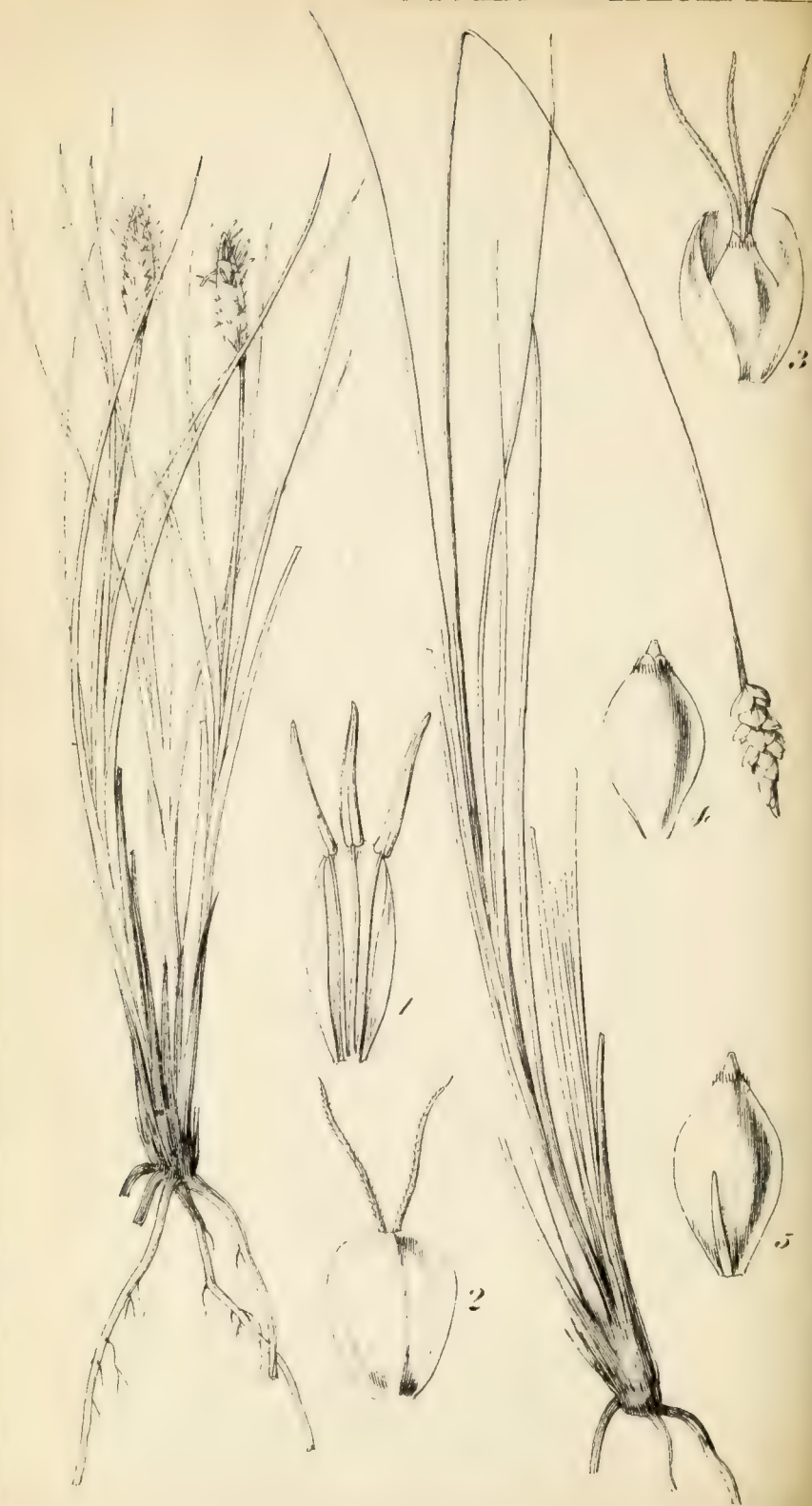
Foliis obovatis tri-(v. septem-) nervibus reticulato-venosis undulatis spinoso-dentatis, capsulis ecalcaratis ventricosis, (floribus minutis glaberrimis). *Br.*

Hakea undulata. Br. Prodr. p. 384.

HAB. New Holland, South coast. *Brown.* King George's Sound. *Mr. Baxter.*

Whole plant glabrous. Besides the three principal nerves, there are 2 or more frequently 4 others, which are parallel with them, not indeed equally originating at the base, but giving the foliage the appearance of being, at first sight, rather 7-than 3-nerved. The flowers are very small, and when dry become black.

Fig. 1. Small portion of a flowering branch; *nat. size.* *f. 2.* Flower scarcely expanded. *f. 3.* Flower fully expanded:—*magnified.*



TAB. CDXLVIII.

CAREX FILIFOLIA. *Nutt.*

Dioica, spica solitaria simplici superne attenuata; masc. squamis late ovatis obtusissimis lateribus involutis; fæm. squamis latissimis scariosis truncatis involutis fructum subæquantibus, fructibus ovatis obtusissime triangulatis apiculatis, seta hypogyna stricta fructu brevior, stigmatibus 3.

Carex filifolia. *Nutt. Gen. Am.* 2. p. 204. *Dewey Caricogr. in Sill. Journ.* v. 11. p. 150, and v. 12. p. 296. tab. P. f. 50. *Gray, N. Am. Cyp.* p. 405. *Schwein. et Torr. Car. in Ann. Lyc. N. York*, v. 1. p. 298. *Br. in Rich. App. Frankl. Journ. ed.* 2. p. 35. *Boott, in Hook. Fl. Ber. Am.* v. 2. p. 208.

Kobresia globularis. *Dewey Caricogr. l. c.* v. 29. p. 253.

Uncinia breviseta. *Gray, N. Am. Cyp.* p. 428.

HAB. Dry plains and gravelly hills of the Missouri. *Nuttall. Bradbury (in Herb. Hook.)* Woody country of Arctic America. *Dr. Richardson.* Rocky mountains. *Drummond.*

In habit allied to our well-known *Carex dioica*, but extremely different in the scales and fruit. In this species, too, there is an hypogynous seta, (though short and not uncinatè), as in the genus *Uncinia*, so that it has perhaps as strong a claim to be placed as by Dr. Asa Gray in that genus, as in *Carex*. That able Botanist had not the opportunity of seeing authentic specimens of Nuttall's *C. filifolia*, and he considered Dr. Richardson's specimens distinct. But there can be no question of their identity.

Fig. 1. Male flower, with the scale, inner view. *f. 2.* Female flower, with the scale, outer view. *f. 3.* Inner view of ditto. *f. 4.* Fruit. *f. 5.* Achenium, with the hypogynous scale:—all magnified.



TAB. CDXLIX.

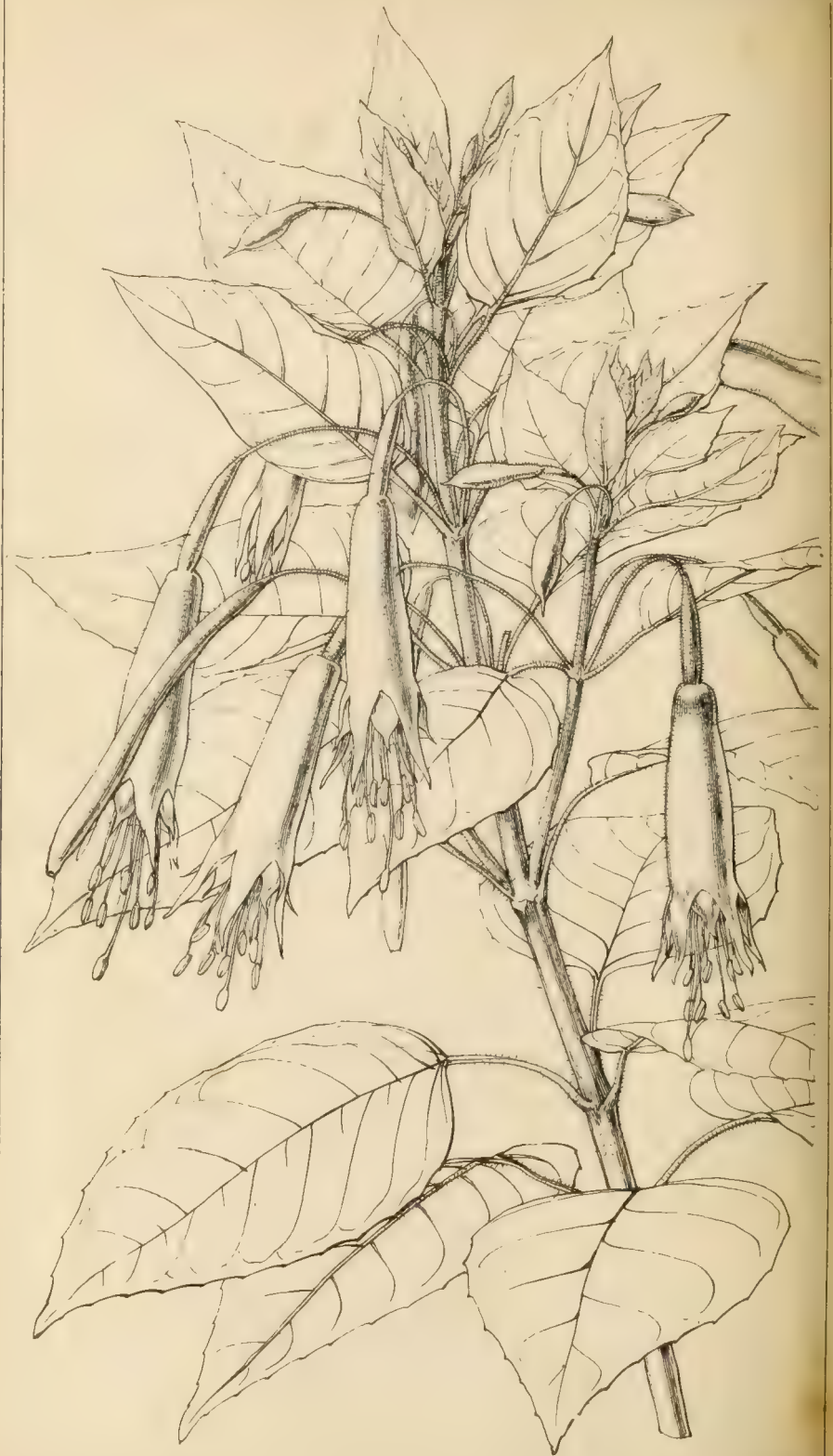
PHYSURUS VAGINATUS. *n. sp.*

Caule elongato folioso, foliis remotis oblongo-ovatis petiolatis, petiolo basi membranaceo inflato vaginato, spica terminali oblonga densiflora glabra, bracteis ovatis acuminatis, sepalis petalisque oblongis labello trilobo lobo medio ovato-acuminato apice reflexo, cornu libero ventricosio sepalis brevior.

HAB. Guatemala. *G. U. Skinner, Esq.*

Radix fibrosa, fibris villosis crassiusculis. Caulis erectus, spithamæus, fere ad pedalem, foliosus. Folia remota, oblongo-ovata, acuminata, tenui-membranacea, petiolata, 5-9-nervia, nervis venulis connexis, petiolis brevibus basi insigniter dilatata, vaginata, inflata, tenuissime membranacea, hyalina, striata. Spica terminalis, oblonga, multiflora. Bracteæ, inferiores sæpe vacuæ, late ovatæ, acuminatæ, hyalino-membranacæ, longitudine ovarii. Flores glaberrimi; sepala oblonga, dorsale cum petalis oblongis agglutinatum. Labellum perianthio brevius, basi calcaratum, trilobum, lobis lateralibus rotundatis, intermedio majore, ovato, acuminato, acumine recurvo. Calcar labello brevius, liberum, apice incrassatum. Columna brevis, anthera rostelloque ovatis acutis.

Fig. 1. Side view of a flower and bractea. *f. 2.* Front view of ditto. *f. 3.* Upper, and *f. 4,* under side of the labellum, (the spur being removed). *f. 5.* Column. *f. 6.* Rostellum and anther. *f. 7.* Pollen-masses:—all *magnified.*



TAB. CDL.

FUCHSIA CORDIFOLIA. (*Benth.*) β .

Caule glabro, foliis oppositis v. ternatim verticillatis longe petiolatis late cordatis (ovatisve) denticulatis minute puberulis subtus subglabris, pedicellis axillaribus unifloris folio brevioribus, calycis pubescentis longe tubulosi laciniis petala ovata brevissime acuminata subduplo superantibus. *Benth.*

Fuchsia cordifolia. *Benth. Pl. Hartweg. p. 74. n. 528. Lindl. Bot. Reg. 1841. t. 70.*

β . foliis ovatis. (TAB. NOSTR. CDL.)

HAB. Guatemala. *G. U. Skinner, Esq.* On Zetuch, a volcano in the same country, at an elevation of 10,000 feet above the level of the sea. *Hartweg.*

It is so long since I had the impressions printed of the plate of this fine species of *Fuchsia* from Mr. Skinner's specimen, that it has now been introduced to our gardens, and has recently been published, both from Hartweg's dried specimens and from those that have flowered in our green houses. Our plant indeed does not deserve the name of *cordifolia*, the leaves being decidedly ovate, not heart-shaped, whence I have thought it better to consider this a variety.



TABS. CDLI. CDLII.

SINCLAIRIA DISCOLOR, *Hook. et Arn.*

SINCLAIRIA, *Hook. et Arn.*—GEN. CHAR. *Capitulum* multiflorum radiatum: *fl.* radii ligulatis, fœmineis; *disci* hermaphr. 5-fidis, lobis linearibus, æqualibus, demum revolutis, apicibus hirsutulis. *Receptaculum* nudum. *Involucrum* campanulatum, squamis imbricatis appressis, interioribus brevibus ovatis. *Antheræ* disci ecaudatæ, filamentis levibus. *Styli rami* elongati, fere subulati; *disci* breviores, lobos corollæ vix superantes, subhispiduli, obtusiusculi. *Achenium* breve, glabrum, angulatum. *Pappus* fulvus, biserialis; *serie externâ* paleaceâ, brevi; *internâ* elongatâ, setiformi, scabrâ, rigidâ, fragili.—*Frutex glaber (vel arbor?) Mexicanus*. *Rami fere ad apices lignosi*. *Folia opposita, longe petiolata, integerrima, rhomboidea, brevi-acuminata, trinervia, supra viridia, subtus albissima, nervis atro-fuscis*. *Petioli graciles, basi dilatati, amplexantes*. *Panicula terminalis, thyrsoides, speciosa*. *Flores lutei*.

Sinclairia discolor, *Hook. et Arn. in Bot. of Beech. Voy. p. 433.*

LAB. Realejo, Guatemala, on the shores of the Pacific. *Dr. Sinclair.*

In the Botany of the voyage of Capt. Beechey, Mr. Arnott and myself dedicated this plant, which we consider an entirely new genus, to our excellent friend Dr. Sinclair, who, in the surveying voyage of H. M. S. Sulphur, on the Pacific side of S. America, employed his leisure in collecting the vegetable productions of the countries he visited. We place *Sinclairia* among the *Veroniaceæ*, near the genera *Hectoria* and *Andromachia*. The flowers are nearly an inch in diameter; leaves 4-5 inches long, and almost as much broad, beneath quite white (but neither tomentose nor farinose,) beautifully marked with the dark brown nerves.

Fig. 1. Capitulum, *f. 2.* Floret from the disk. *f. 3.* Portion of the external series of the pappus. *f. 4.* Floret of the ray. *f. 5.* Hair from the inner series of the pappus. *f. 6.* Upper part of a corolla of the disk laid open to show the stamens:—*all magnified.*





TABS. CDLIII. CDLIV.

ETABALLIA GUIANENSIS.

GEN. CHAR. *Calyx* tubulosus, apice breviter 5-dentatus, subbilabiatus. *Petala* 5, ad basin calycis inserta, longissime linearia, æstivatione inflexa, imbricata. *Stamina* 10, monadelpha, alterna breviora. *Antheræ* ovatae. *Ovarium* sessile, villosum, 2-3-ovulatum. *Stylus* brevis. *Stigma* oblique capitatum. *Legumen* ?—*Arbor ramis ramosissimis glabris. Folia simplicia (unifoliolata) brevissime petiolata, ovata v. ovato-oblonga breviter et acute acuminata, penninervia, coriacea, glabra v. subtus ad venas sparse pubescentia. Spicæ florum axillares et terminales densæ. Bracteæ ovato-orbiculatæ, concavæ, ante anthesin imbricatæ. Bracteolæ minimæ, lanceolatæ. Flores sessiles. Calyx ferrugineus. Petala lutea, omnia inter se subsimilia. Stanina calycem æquantia, ultra medium symmetrice monadelpha, tubo integro.*

Etaballia Guianensis. Benth. in Hook. Journ. Bot. 2. p. 99.

HAB. Abundant at the cataracts of Etabally on the Essequibo river, where it forms a strikingly beautiful tree, almost covered with bright yellow flowers, and is called by the natives *Etabally*, after the name of the cataract. Schomburgk.

This is a highly singular plant; being one of the very few *Leguminosæ* which cannot be recognised as belonging to that Order at first sight. It has indeed very much the aspect of an *Inocarpus*; although, on examining the structure of the flowers, it is found to be closely allied to *Schnella* (a genus including most of the small-flowered American *Bauhinieæ*.) The simple foliage without any tendency to bifurcation of the midrib is rare; but is met with in a few other species of the *Bauhinieæ*.

The supposed second species, mentioned in the work above quoted, under the name of *E. macrophylla*, must be suppressed, having originated in a mistake.

The drawing was made by Dr. Joseph Hooker, of H. M. surveying ship *Erebus*. Bentham.

Fig. 1. Flower. f. 2. Stamens. f. 3. Staminal tube cut open, showing the ovary. f. 4. Section of the ovary:—all magnified.



TAB. CDLV.

OCIMUM BRACTEOSUM.

Caule herbaceo erecto piloso-hispido, foliis breviter petiolatis oblongo-lanceolatis acutiusculis remote serratis basi angustatis supra glabriusculis subtus hispidulis, floralibus bractæformibus, calyce 2-3-plo longioribus coloratis, calyce fructifero reflexo ovato subinflato dente supremo ovato breviter decurrente, lateralibus ovatis breviter mucronatis, infimis longe subulatis, filamentis edentulis.

Ocimum bracteosum. *Benth. Lab. Gen. et Sp. p. 14.*

HAB. In the fields of Lambsar in Senegambia. *Leprieur and Perottet.*

This and the nine following plates illustrate some of the genera of *Ocimoideæ*, a tribe of *Labiatae* consisting chiefly of tropical species, and readily distinguished by their stamina, which instead of ascending under the upper lip of the corolla in pairs as in most *Labiatae*, or spreading in all directions as in *Menthoideæ*, are turned downwards, and lie on the lower lip; a circumstance which induced the older authors to consider the flowers as resupinate. The anthers, moreover, sooner or later after they have shed their pollen, open out into an orbicular or reniform apparently unilocular disk, the two cells being always confluent. The genus *Ocimum*, as now limited, is distinguished from others of the tribe by the decurrent margins of the upper tooth of the calyx, the flat lower lip of the corolla, and from *Orthosiphon* by the style bifid at the apex with pointed lobes and minute or marginal stigmatic surfaces. *O. bracteosum* belongs to the section *Gymnocimum*, in which the filaments are entirely without appendages at the base. *Bentham.*

Fig. 1. Flower. *f. 2.* The same cut open. *f. 3.* Calyx at the maturity of the fruit. *f. 4.* Upper portion of the style. *f. 5.* Anthers. *f. 6.* Carpel. *f. 7.* Seed:—*all magnified.*



TAB. CDLVI.

ACROCEPHALUS CAPITATUS.

Caule procumbente foliisque ovatis subglabris, calycis labio inferiore 4-dentato.

Prunella indica. *Burm. Fl. Ind. p. 130.*

Ocimum capitellatum. *Linn. Mant. p. 276.*

Ocimum capitatum. *Roth, Nov. Pl. Sp. 276.*

Acrocephalus capitatus. *Benth. Lab. Gen. et Sp. p. 23.*

HAB. Common in moist situations over the greater portion of East India, in the Burman Empire, in Java, and, according to *Willdenow*, in China.

This little plant has much the appearance of an *Escholtzia* and in some respects approaches that genus in character. The decidedly declinate stamens have, however, placed it amongst *Ocimoideæ*, where, with a Javanese plant (probably a mere variety) and a Madagascar species, distinguished by the entire lower lip of the calyx, it forms a genus differing from *Ocimum*, *Geniosporum* and *Moschosma* in the form of the calyx, and more especially in inflorescence, and from all other *Ocimoideæ* by the all but regular corolla. The calyx is tubular, as in several *Geniospora*; but in the latter genus the lateral teeth are more or less connected with the upper one into an upper lip, whilst in *Acrocephalus* the four lower teeth form the lower lip, leaving the upper tooth solitary. *Bentham.*

Fig. 1. Flower. *f. 2.* Ripe calyx. *f. 3.* Corolla cut open. *f. 4.* Upper portion of the style. *f. 5.* Bract. *f. 6.* Carpel:—*all magnified.*



TAB. CDLVII.

MARSYPIANTHES HYPTOIDES.

Iyptis Chamædrys. Willd. *Sp. Pl.* 3. p. 85. Poit. *Ann. Mus. Par.* 7. p. 468.

I. pseudochamædrys. Poit. *Ann. Mus. Par.* 7. 469.

I. inflata. Spreng. *Syst.* 2. p. 731.

I. lurida. Spreng. *l. c.*

Marsypianthes hyptoides. Mart. in Benth. *Lab. Gen. et Sp.* p. 64.

HAB. A very common weed, especially near the sea, in the greater part of tropical America, from Mexico to Guayaquil on one coast, and to South Brazil on the other.

This species varies much in aspect, but the different forms can hardly be considered as distinct species. It constitutes alone a genus, with the habit and general character of the capitate *Hyptides*, but differing from them in the broadly campanulate calyx, and especially in the very singular form of the carpels, the margins of which are expanded into a membranous wing, with the edges toothed and bent inwards, so as to give to the whole carpel a kind of boat shape. The flower is precisely that of a *Hyptis*. *Bentham.*

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3, 4. Anthers. *f.* 5. Upper portion of the style. *f.* 6. Mature calyx. *f.* 7. Fruit, as enclosed in the calyx. *f.* 8. Single carpel viewed from behind. *f.* 9. The same seen in front. *f.* 10. Section of the same:—*all magnified.*





TAB. CDLVIII.

HYPTIS VERTICILLATA.

Suffruticosa, ramis erectis pubescentibus v. pilosis, foliis breviter petiolatis lanceolatis acutis serratis basi rotundatoangustatis tenuissime pubescentibus, verticillastris laxiusculis plurifloris distinctis racemosis, calycis ovati glabri dentibus erectis ovato-lanceolatis.

Hyptis verticillata. Jacq. *Ic. Rar.* 1. t. 113. *Benth. Lab.* p. 130.

Mentha hyptiformis. Lam. *Dict.* 4. p. 110.

Stachys patens. Swartz.

HAB. Common on the roadsides, in various parts of the warmer regions of Mexico, in St. Domingo, and perhaps some other of the West Indian Islands.

The genus *Hyptis*, together with the small allied genera, *Peltodon*, *Marsypianthes*, and *Eriope*, consists entirely of American species, and is readily known among *Ocimoideæ* by the pouch-shaped hanging lower division of the corolla, attached by so narrow a base that it appears often almost articulate. It is one of the most extensive in the Order, as there are above 220 species known; most of them natives of the lower mountainous regions of South America, and a few of them exceedingly common wherever cultivation has commenced under the tropics in the new world and even in the old world, where they have probably been introduced by man. There is a very great diversity in habit, but little in structure of the flower, in the different species which have been distributed into nineteen sections founded chiefly on inflorescence. The *H. verticillata* belongs to the fifteenth section *Minthidium*, consisting of herbs or undershrubs, with the flower-cymes sessile or nearly so, many-flowered, and condensed into verticillasters as in the majority of *Labiatæ*, the calyx regular, the corolla scarcely protruding from it, and the bracts inconspicuous. The species have thus very much the appearance of *Menthæ*, in everything but the corolla and stamens. *Bentham.*

Fig. 1. Flower. *f.* 2. The same cut open. *f.* 3, 4. Anthers. *f.* 5. Upper portion of the style. *f.* 6, 7. Carpels:—*all magnified.*



TAB. CDLIX.

ORTHOSIPHON RUBICUNDUS.

Caulibus caespitosis basi foliosis ramosis, foliis oblongo-ovatis grosse dentatis basi angustatis infimis petiolatis, superioribus sessilibus, corollæ tubo rectiusculo, calyce duplo longiore, fauce subæquali, staminibus corollâ parum brevioribus.

Orthosiphon rubicundus. *Benth. Lab. Gen. et Sp. p. 26.*

Plectranthes rubicunda. *Don, Prod. Fl. Nep. p. 116.*

Lumnitzera rubicunda. *Spreng. Syst. Cur. Post. p. 223.*

HAB. Along the mountainous regions of North India, from the Kheesee Pass? at the entrance of Deyra Dhoun (*Royle*), to the Burmese territory. *Wallich.*

The genus *Orthosiphon* has much of the habit, the calyx, and most of the characters of *Ocimum*; but the tube of the corolla is usually longer, and the apex of the style, instead of being divided into two linear pointed lobes, is almost entire and capitate, with a terminal stigmatic surface. The species are all Asiatic or African, excepting a remarkable one, contained in the South American herbarium transmitted by Pavon to the late Mr. Lambert, but of which the precise station is as yet unknown. *Bentham.*

Fig. 1. Flower. *f. 2.* Corolla cut open. *f. 3, 4.* Anthers. *f. 5.* Upper portion of the style (represented too much flattened.) *f. 6.* Mature calyx. *f. 7.* Fruit. *f. 8.* Single carpel. *f. 9.* Floral leaf:—all magnified.



TAB. CDLX.

PLECTRANTHUS TERNIFOLIUS.

Tomentoso-villosus, caule erecto subramoso, foliis ternatim verticillatis subsessilibus lanceolato-oblongis acuminatis serratis basi cuneatis rugosis, paniculis ramosis densis pyramidatis multifloris, calycibus fructiferis cylindricis erectis striatis æqualiter 5-dentatis.

Plectranthus ternifolius. Don, *Prod. Fl. Nep.* 117. Benth. *Lab.* 44.

Ocimum ternifolium. Spreng. *Syst. Cur. Post.* p. 224.

HAB. On the roadsides, in the damp wooded regions along the Himalaya, from Kamaon to the Burmese territory.

Plectranthus, one of the largest genera of Asiatic *Ocimoideæ*, is distinguished from *Ocimum* by the concave lower division of its corolla, and from *Coleus* by the stamens not connected into a tube. It varies in habit and calyx, as well as in the form of the tube of the corolla, from which characters it has been divided into seven sections. To these ought perhaps to be added three more, *Anisochilus*, *Æollanthus* and *Pycnostachys*, genera which have been founded merely upon peculiarities in the form of the calyx. The *P. ternifolius*, along with a closely allied South African species, forms the section *Pyramidium*; characterised by an erect, tubular or ovate, equally 5-toothed calyx (in the fruit-bearing state), a straight corolline tube, and a dense pyramidically paniculate inflorescence. *Bentham*.

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3. Stamen. *f.* 4. Anther seen from the back. *f.* 5. Upper portion of the style. *f.* 6. Ovary. *f.* 7. Single carpel seen from the side:—*all magnified*.



TAB. CDLXI.

ERIOPE MACROSTACHYA.

Fruticosa, ramis pubescentibus villosisve, foliis petiolatis ovato-lanceolatis acutis denticulatis basi rotundatis subcordatisve rarius cuneatis rugosis utrinque villosis, panícula ampla ramosa.

Eriope macrostachya. *Mart. in Benth. Lab. Gen. et Sp. p. 145.*

HAB. Elevated *Campos*, and woods of the mining districts in Brazil. *Martius and others.*

The essential character, derived from the corolla, is very nearly the same in *Eriope* as in *Hyptis*, and the affinity with the section *Hypenia* of that genus is certainly very close. Yet the peculiar form of the mature calyx, bilabiate and closed at the mouth with hairs, appears constant; as is also the inflorescence, the flowers being solitary and opposite as in *Scutellaria*, forming leafless simple or paniculately branched racemes. There are about fifteen species known, all Brazilian. *Bentham.*

Fig. 1. Flower. *f. 2.* Calyx cut open. *f. 3.* Corolla cut open. *f. 4, 5.* Stamens. *f. 6.* Ovary and style:—*all magnified.*



TAB. CDLXII.

GENIOSPORUM STROBILIFERUM.

Caule erecto ramoso, foliis subsessilibus ovato-oblongis v. ovato-lanceolatis utrinque angustatis supra hispidulis subtus glabriusculis, verticillastris multifloris in apice ramorum spicatis infimis subremotis, foliis floralibus ovatis acuminatis flores superantibus, calycibus subsessilibus, fructiferis erectis striatis basi transverse rugosis, ore membranaceo irregulariter 5-dentato.

Geniosporum strobiliferum. Wall. *Pl. As. Rar.* 2. p. 18. Benth. *Lab.* p. 20.

HAB. In North India, along the whole range of the Himalaya.

The corolla of *Geniosporum* is the same as that of *Ocimum* and *Moschosma*, but the upper lobe of the calyx is not large and decurrent as in *Ocimum*, and *Moschosma* has a clavate style. The habit of *Geniosporum* is different from that of any of the allied genera. The verticillasters are dense and many-flowered, the upper floral leaves and summits of the calyces are frequently white or coloured, and the ripe calyx is usually marked with transverse reticulations at its base. *Bentham.*

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3. Anthers. *f.* 4. Upper portion of the style. *f.* 5. Mature calyx. *f.* 6. Fruit. *f.* 7. Single carpel:—all magnified.





TAB. CDLXIII.

HYPTIS SALZMANNI.

Fruticosa, ramis foliatis patentim pilosis, foliis petiolatis ovatis obtusis eroso-crenatis rugosis pubescentibus subtus pallidis, panicula laxissima subnuda glaberrima glauca, ramis elongatis, pedunculis filiformibus 1-3-floris, calycibus campanulatis venosis, dentibus æqualibus acutis, corollæ tubo calyce subduplo longiore.

Hyptis Salzmanni. *Benth. Lab. Gen. et Sp. p. 138.*

HAB. Along the Rio San Francisco, from the province of Minas Geraes to its mouth, and in various parts of the province of Bahia.

This species belongs to the section *Hypenia*, remarkable for its peculiar habit, the lower portion of the plant being invariably clothed with long spreading hairs, whilst the panicle is always perfectly smooth, and more or less glaucous. The inflorescence approaches that of *Eriope*, and in some species the great length of the tube of the corolla alters much the appearance of the flower; yet these characters are so ill-defined and connected by so many intermediate states with more ordinary forms of *Hyptis*, that it would be highly inconvenient to adopt them as generic distinctions. Many of the species are very handsome, with scarlet flowers above an inch in length. *Bentham.*

Fig. 1. Flower. *f. 2.* Mature calyx. *f. 3.* Corolla cut open. *f. 4.* Anther. *f. 5.* Upper portion of the style. *f. 6.* Fruit. *f. 7.* Single carpel:—*all magnified.*





TAB. CDLXIV.

PLECTRANTHUS SCROPHULARIOIDES.

Caule herbaceo erecto ramoso subglabro, foliis longe petiolatis lato-ovatis crenatis basi rotundatis inæqualiter cordatis v. subcuneatis, floralibus bracteisque minutis, paniculis laxis, calycibus fructiferis declinatis profunde bilabiatis inflatis, labio superiore adscendente tridentato inferiore concavo porrecto breviter bidentato, dentibus omnibus obtusis, corollis inflatis supra gibbis calyce subtriplo longioribus, staminibus exsertis. *Plectranthus scrophularioides*. *Wall. Pl. As. Rar.* 2. p. 16. *Benth. Lab.* p. 40.

HAB. North India, along torrents in Nepal and Kamaon. *Wallich*.

The section of *Plectranthus*, to which this plant belongs, was established by Schrader as a genus, under the name of *Isodon*; the teeth of the calyx, in the species which he described, being nearly equal and scarcely bilabiate, even at maturity. The name, having been thus applied, was adopted for the section, although not so suitable to the majority of its species, in which the calyx is more or less decidedly bilabiate. In the *P. scrophularioides* it is deeply so. The true character of the section consists in the lateral teeth of the calyx being more or less connected with the upper one, not with the lower ones as in *Coleoides*, in the want of that spur to the corolla which distinguishes *Germanea* and *Melissoides*, and the ripe calyx being declinate, not erect as in *Pyramidium* and *Amethystoides*. *Bentham*.

Fig. 1. Flower. *f. 2.* Corolla cut open. *f. 3.* Mature calyx. *f. 4.* Anther. *f. 5.* Upper portion of the style. *f. 6.* Fruit. *f. 7.* Single carpel:—*all magnified*.



TAB. CDLXV.

ILEX AFFINIS. *Gardn.*

Glaberrima, foliis oblongo-lanceolatis utrinque attenuatis supra medium obtuse et distanter serratis inferne integerrimis, racemis 2-3 axillaribus paniculatis densifloris, calyce glabro.

Ilex affinis. Gardn. Herb. Bras. n. 3086.

HAB. In wooded ravines in the Serra de Natividade, province of Goyaz, Brazil. January, 1840.

This species is nearly related to the *Ilex Paraguayensis*, (see Journ. of Bot. Tab. I. and II.), but is readily distinguished, both in the living and dried state, by its very thick coriaceous leaves, which are also more obtusely and distantly serrated, and less cuneated; and by its more numerous and more densely flowered racemes. This is the most northern species I have met with in Brazil, and although not uncommon about the Villa de Natividade, I have never seen its leaves collected to be made into tea. In my Goyaz collections there is another species, with much broader, shorter and nearly entire leaves, shorter and fewer-flowered racemes, and with flowers nearly twice as large. It may be characterized as follows:

Ilex rivularis; glaberrima, foliis obovatis obtusis versus apicem obscure crenato-serratis basi acutis, racemis 2-4 axillaribus vix petiolo duplo longioribus, pedicellis unifloris, calyce pubescente, drupis (siccis) 4-sulcatis.

Ilex rivularis. Gardn. Herb. Bras. n. 3085.

HAB. In woods by the sides of streams near Villa de Natividade, province of Goyaz, Brazil. January, 1840.

Frutex 10-15 pedalis, glaberrimus, ramulis paucè angulatis.

Folia 4-4½ poll. longa, 2 circiter lata. *G. Gardner.*

Fig. 1, 2. Flowers. f. 3. Pistil, and the corolla laid open:—magnified.





TAB. CDLXVI.

TAPURA CILIATA. *Gardn.*

Foliis oblongis obtusis versus basi subcuneatis supra glaberrimis subtus villosis margine revolutis dense villosociliatis, petiolis floriferis, floribus in glomerulum dense aggregatis sessilibus.

Tapura ciliata. *Gardn. Herb. Bras. n.* 3087.

HAB. Rare in dry, open woods between the Mission of Duro, and Villa de Natividade, in the province of Goyaz, Brazil. January, 1840.

Arbor 12-16 pedalis ramosissima. *Ramuli* fusco-tomentosi.

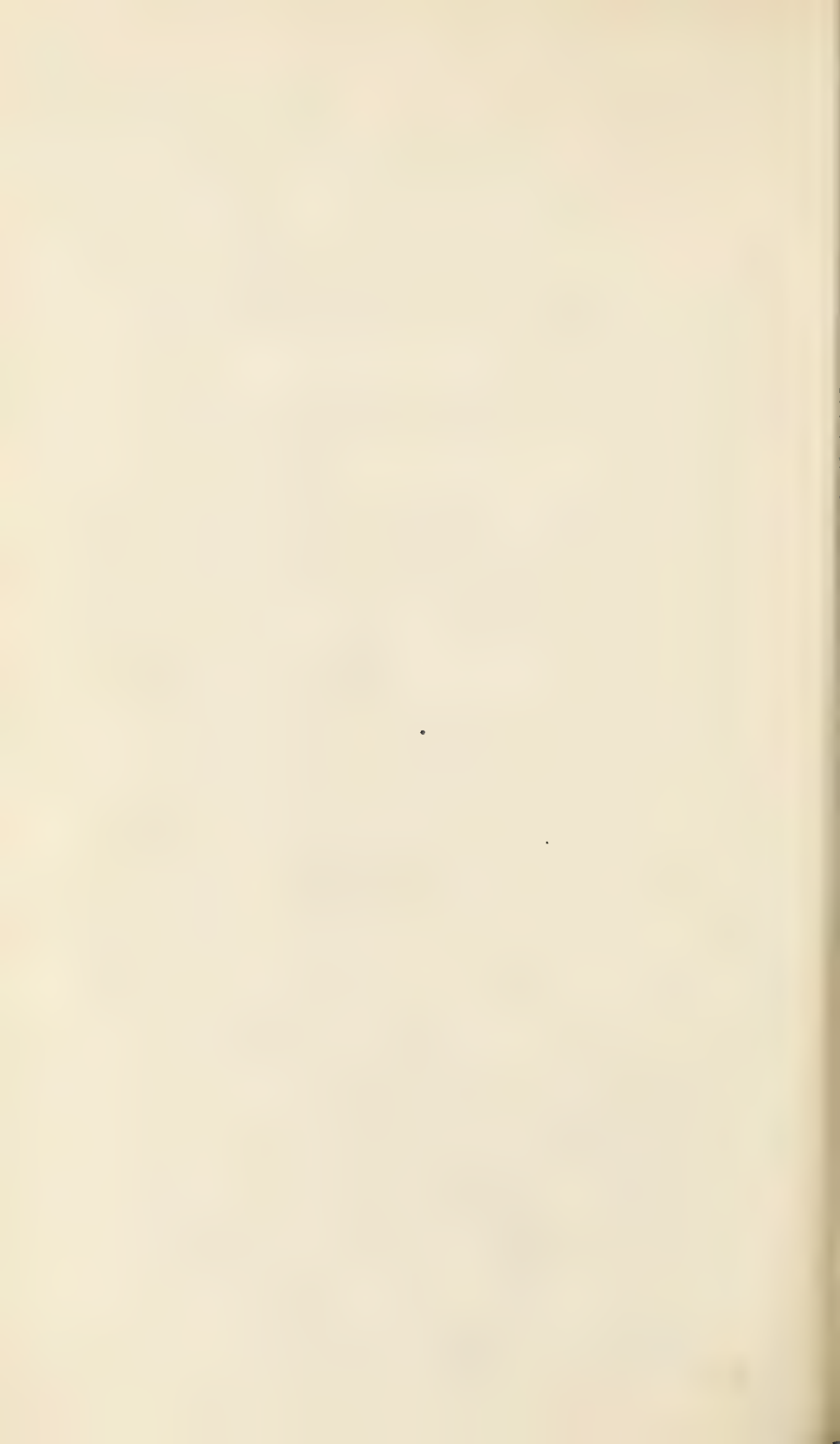
Folia coriacea, alterna, petiolata, oblonga, obtusa, basi subcuneata, supra glaberrima, subtus villosotomentosa, margine revoluta, dense ciliata. *Petioles* breves, villosi, apice floriferi.

Stipulæ parvæ, triangulares, deciduæ. *Pedicelli* cum petiolo concreti. *Flores* flavi, in apice petioli dense aggregati, sessiles.

Calyx basi 3-bracteatus, 5-partitus, lobis inæqualibus, ovatis, obtusis, villosis. *Corolla* gamopetala imo basi calycis concreta, tubo intus villosus, limbo subbilabiato, labio superiore 2-lobo, lobis late obovatis emarginatis, inferiore 3-lobo, lobis linearilanceolatis. *Stamina* 5. *Filamenta* cum petalis cohærentia, iisdem alterna et æquilonga, 3 superiora antherifera, 2 inferiora sterilia. *Antheræ* introrsæ, oblongæ, biloculares, longitudinaliter dehiscentes. *Stylus* filiformis, villosus, exsertus. *Stigma* trilobum. *Ovarium* ovato-trigonum, triloculare.

This species of *Tapura* is very distinct from that figured by Aublet at Tab. 48 of his *Plant Guian.*, which has hitherto been the only known species of the genus. The Brazilian one is readily distinguished by its densely ciliated leaves, and the greater number of its flowers. The structure of the corolla is also different from that of the plant of Aublet. The upper lip of the latter has only one lobe, and the lower two; whereas in mine the upper lip has two broad emarginate lobes, and the lower three linear-lanceolate ones, nearly equal in length to the others. In structure the present plant is truly gamopetalous, the filaments forming the bond of union, and consequently alternating with the segments. Aublet says:—"Filamenta 5, duo ad latera labii superioris, duo breviora tubo corollæ sub labio superiori, quintum longissimum ad basin labii inferioris." Judging from what is to be seen in my plant, I should imagine that Aublet has not correctly defined the position of the stamina.—*G. Gardner.*

Fig. 1. Single flower and bractæas. *f. 2.* Corolla laid open. *f. 3.* Ovary. *f. 4.* Hypogynous gland:—*magnified.*





TAB. CDLXVII.

ADIANTUM CALCAREUM. *Gardn.*

Frondibus pinnatis glabris, pinnis dissimilibus, superioribus dimidiatis subtriangularibus basi truncatis margine superiore incis, inferioribus flabellatis profunde incis, laciniis emarginatis basi acutis vel subcordatis, indusiis lævibus, rachi glabra apice sæpe nuda elongata radicante.

Adiantum calcareum. *Gardn. Herb. Bras. n. 3551.*

HAB. In clefts of calcareous rocks near Natividade, province of Goyaz, Brazil. December, 1839.

Frondes fasciculatæ. *Stipes* subpollicaris, atropurpureus, teres, nitidus, subpaleaceus. *Rachis* teres, glabra, in apice frondis sæpe nuda, elongata, extremitate demum radicante. *Frons* 4-6 pollicaris, pinnata. *Pinnæ* fere semipollicares, alternæ, brevissime petiolatæ, superiores dimidiatæ, subtriangulares, basi truncatæ, margine superiore incisæ; inferiores flabellatæ, profunde inciso-lobatæ, laciniis emarginatis, basi acutæ vel subcordatæ. *Venæ* radiatæ, pluries furcatæ, venulis parallelis. *Sori* marginales, oblongi. *Indusia* oblonga, membranacea, glabra.

This species of *Adiantum* comes near *A. caudatum*, Linn., but differs in being a much smaller plant, thinner in texture, and smooth. The pinnæ are also shorter, broader, more deeply incised, and less recurved than they are in *A. caudatum*. The fronds of both species are occasionally radicant at their apices; and sometimes the lower pinnæ in *A. caudatum* assume the rounded flabellate form, which in the present plant proceeds half-way up the rachis. *G. Gardner.*

Fig. 1. Lower pinna. *f. 2.* Sorus; the indusium laid open:—*magnified.*





TAB. CDLXVIII.

ACHIMENES MULTIFLORA. *Gardn.*

Annua tota hirsuta erecta, foliis petiolatis oppositis ternisve ovatis acutis basi obtusis argute subduplicato-serratis, pedunculis axillaribus 3-5 floris infimis elongatis supremis subsessilibus, calycis lobis linearibus erectis dense hirsutis, corollæ tubo infundibuliformi hinc basi gibbo, lobis rotundatis.

Achimenes multiflora. Gardn. Herb. Bras. n. 3873.

HAB. On dry banks in woods on the Serra de Santa Brida, and near Villa de Arrayas, in the province of Goyaz, Brazil.

Herba annua, tota hirsuto-villosa, 1-1½ pedalis. *Caules* simplices. *Folia* 2½-3 poll. longa, pollicem circiter lata, opposita vel raro verticillata. *Petioles* 4-6 lineam longi. *Pedunculi* axillares, 3-5 flori. *Pedicelli* erecti, *corolla* dimidio breviores. *Calycis* *tubus* ovario adnatus, limbus 5-partitus, lobis linearibus obtusis. *Corolla* pallide purpurea, glabra, tubuloso-infundibuliformis, basi postice hinc gibba, limbo irregulariter bilabiato, 5-fido, lobo medio labii inferiore subdenticulato, lobis reliquis integris rotundatis. *Stamina* 4 didynama, antheris inter se cohærentibus. *Annulus* perigynus integer. *Stylus* apice bifidus, lobis latis obtusis intus stigmatiferis. *Ovarium* villosissimum.

The corolla of this pretty little plant is almost that of *Gloxinia*, but the bifid stigma and entire annulus prove it to be a species of *Achimenes*. It is probably allied to *A. hirsuta*, DC., which is also Brazilian. *G. Gardner.*



TAB. CDLXIX.

TAPINA VILLOSA. *Gardn.*

Herbacea simplex erecta villosa, foliis ovatis vel ovato-oblongis utrinque obtusis vel acutiusculis grosse serratis supra dense pilosis subtus præcipue ad nervos villosis, pedunculis axillaribus 1-floris, calycis tubo brevi, lobis 5 lanceolatis, corollæ tubo brevi hinc basi gibbo.

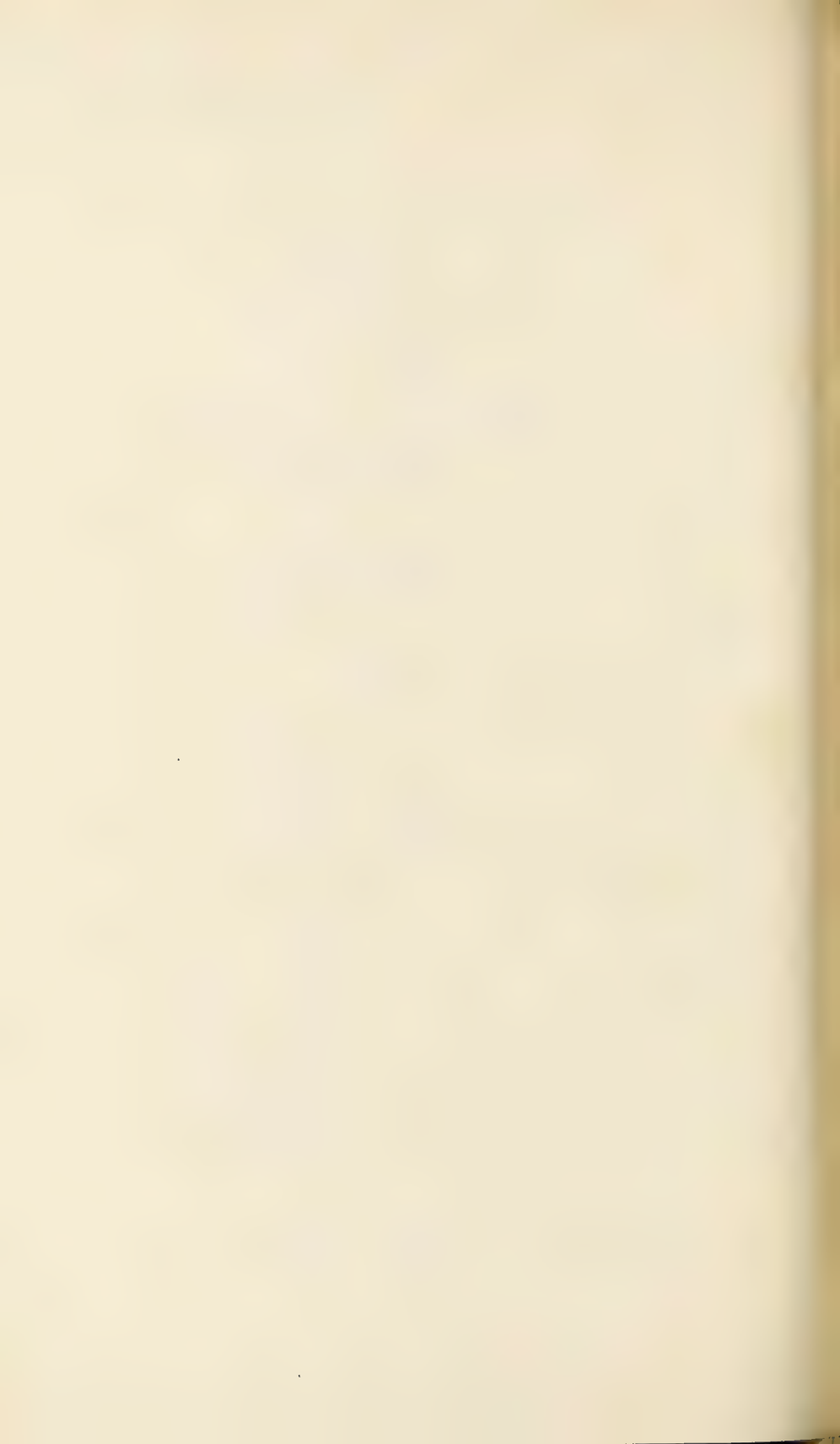
Tapina villosa. Gardn. Herb. Brasil. n. 3875.

HAB. In dry clefts of rocks near the summit of the Serra de Natividade, in the north of the province of Goyaz, Brazil, February, 1840.

Herba pusilla, 1-5 uncialis, tota villosa, villi articulati. *Radix* carnosa, squamosa, fibrosa, fibrillis villosis, fuscis. *Caules* solitarii, simplices. *Folia* 1-1½ poll. longa, 8-9 lin. lata. *Pedunculi* axillares, solitarii, uniflori, internodo longiores. *Calyx* liber, 5-partitus, lobis subæqualibus, lanceolatis. *Corolla* hypogyna, infundibuliformis, tubo brevi purpurascens, basi postice gibbo, limbo albo, quinquefido, subæqualiter patente, lobis obtusis. *Stamina* 4, didynama, cum quinto rudimentario. *Filamenta* glabra. *Antheræ* ovatae, basi cordatae, coherentes. *Annulus* hypogynus integer, postice in glandulam tumens. *Ovarium* ovatum, villosum. *Stylus* simplex, apice subincrassatus. *Stigma* capitato-bilobum. *Fructus* non vidi.

This little plant agrees with the characters of *Tapina* in every thing except the form of the corolla, which has a shorter and more regular tube than the species described and figured by Martius in the Nov. Gen. et Sp. Plantarum. In one of the flowers which I examined of this plant, I found the fifth filament bearing a perfect anther, which cohered with the other four.—*G. Gardner.*

Fig. 1, 2. Specimens of Tapina villosa :—nat. size.





TAB. CDLXX.

ECHITES PULCHELLA. *Gardn.*

Suffruticosa, erecta, glaberrima, foliis oblongo-lanceolatis acutis basi subcuneatis, pedunculis valde elongatis 4-6-floris, calycis laciniis subulatis.

Echites pulchella. *Gardn. Herb. Bras. n.* 3886.

HAB. In a moist upland *campo* near Villa de Arrayas, province of Goyaz, Brazil. March, 1840.

This very rare species of *Echites* is a suffruticose plant, about a foot and a half high, glabrous in all its parts. *Leaves* 2·2½ inches long, and from 4 to 6 lines broad, opposite, oblong-lanceolate, acute, narrowed towards the base, with a slightly thickened margin. *Flowers* 4-6 on a peduncle which is more than half the length of the whole plant. *Pedicels* 4-6 lines long. *Calyx* small, 5-parted: segments subulate. *Corolla* infundibuliform, scarlet; tube about three quarters of an inch long, contracted a little at the apex; segments oblong-lanceolate, acute, spreading. *Stamens* inserted on the tube of the corolla near its base. *Filaments* short, villous. *Anthers* sagittate, cohering by their middle to the *stigma*. *Fruit* not seen.—*G. Gardner.*







TAB. CDLXXI.

IPOMÆA (ORTHIPOMÆA) NERIIFOLIA. *Gardn.*

Fruticosa, ramosa, erecta, foliis confertis vix petiolatis longe linearibus utrinque attenuatis margine revolutis pellucido-punctatis hirsutis, pedunculis subtrifloris, calycis piloso-pubescentibus laciniis inæqualibus late oblongis obtusis, corollæ tubo infundibuliformi limbo patente parum lobato.

Ipomæa neriifolia. Gardn. Herb. Bras. n. 3906.

HAB. Rare in dry exposed places on the Serra de Natividade, province of Goyaz, Brazil, February 1840.

Frutex bipedalis. Rami teretes, striati, villosi-tomentosi. Folia conferta, alterna, vix petiolata, utrinque attenuata, villosa, pellucido-punctata, punctis rotundatis. Pedunculi axillares, villosi, breves, subtriflori. Pedicelli pedunculo subæquales. Calycis foliola subinæqualia, late oblonga, obtusa, concava, piloso-pubescentia. Corolla pallide violacea, tubo infundibuliformi, limbo repando, patente. Stamina erecta.

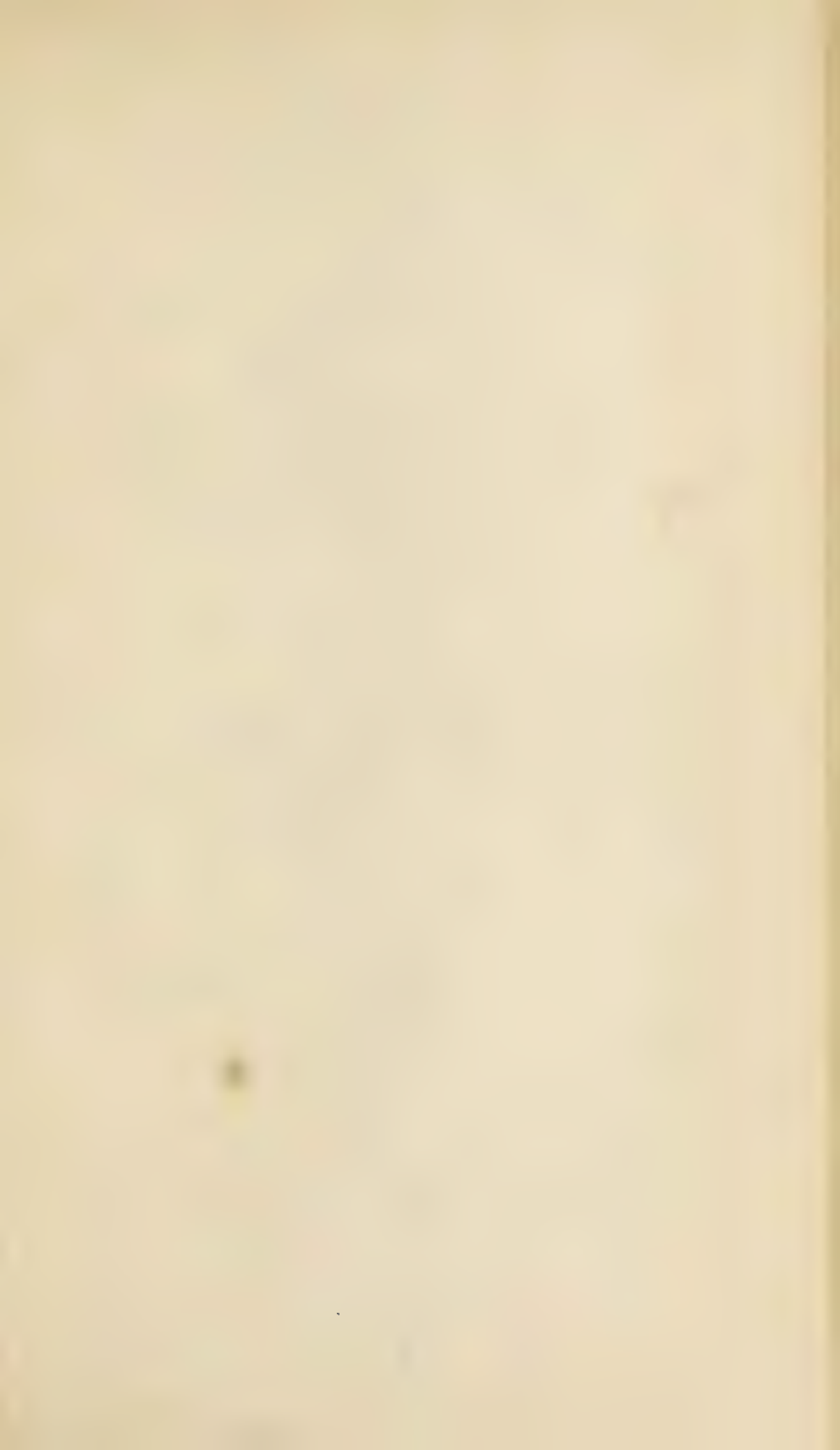
Another species of *Ipomæa*, belonging to the same section, which I possess from a more northern part of the province of Goyaz, may be characterized as follows :

Ipomæa (Orthipomæa) hirsutissima ; fruticosa, erecta, tota hirsutissima, caule simplici, foliis brevi-petiolatis oblongo-lanceolatis apice acutis cuspidatis basi rotundatis cordatisve, pedunculis axillaribus 1-floris folio triplo brevioribus, pedicellis basi bibracteatis, bracteis magnis foliaceis lanceolatis longe petiolatis, calycis dense hirsuti laciniis lanceolatis acuminatis, corollæ tubo infundibuliformi extus hirsuto limbo patente repando.

Ipomæa hirsutissima. Gardn. Herb. Bras. n. 3355.

HAB. In dry upland *campos*, near the Mission of Duro, province of Goyaz, Brazil. Oct. 1839.

Caules plures, vix pedales. Corolla roseo-violacea. Antheræ erectæ, tubo inclusæ.—G. Gardner.





TAB. CDLXXII.

GLOXINIA ICHTHYOSTOMA. *Gardn.*

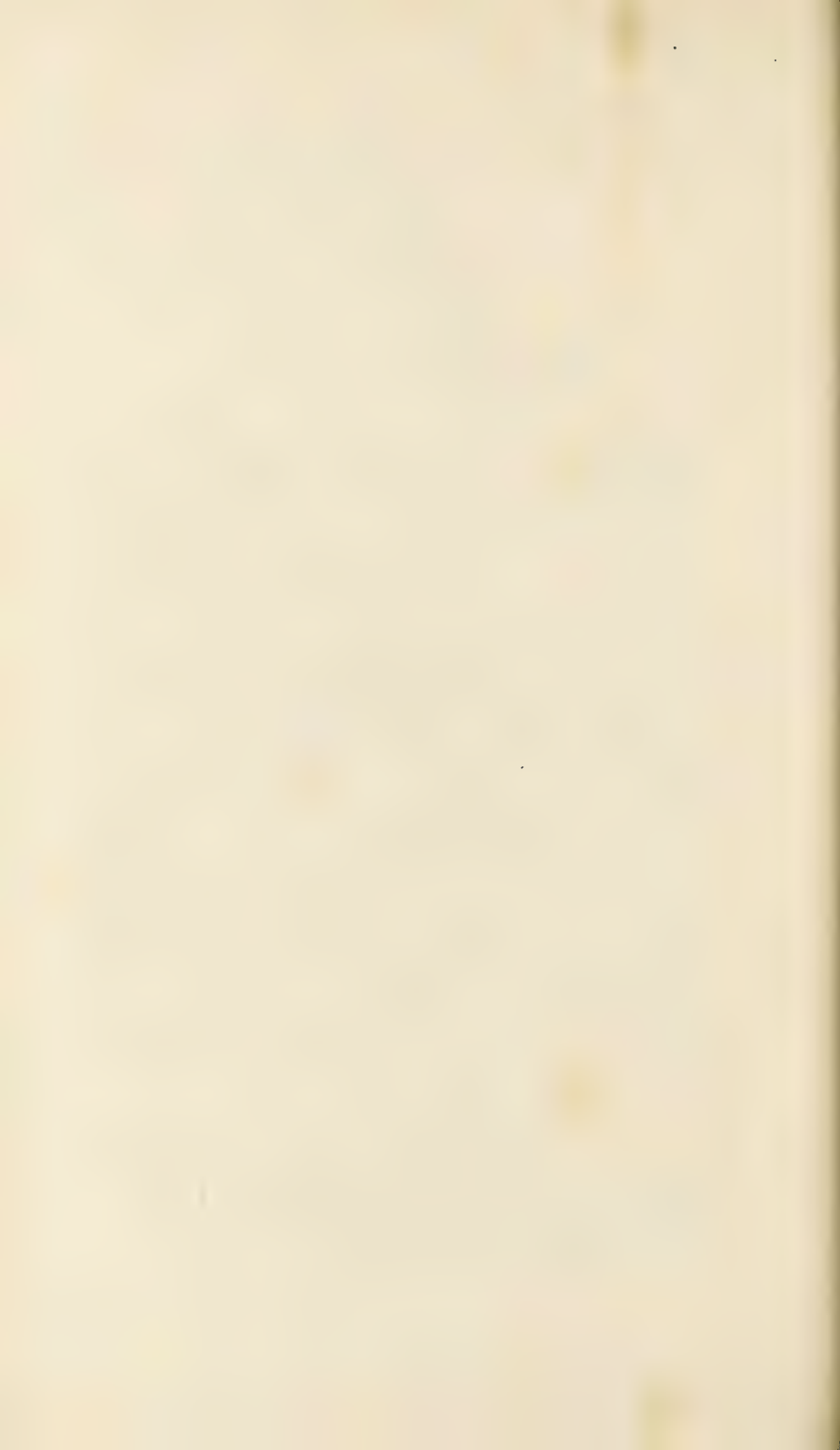
Annua, caule elongato erecto hirsuto-villoso, foliis subinæquilateralis ovatis acutis basi rotundatis vel subcordatis grossè crenato-serratis utrinque hirsutiusculis, pedicellis axillaribus solitariis 1-floris, calycis 5-partiti lobis lineari-lanceolatis patentibus, corollæ tubo infundibuliformi campanulato, limbo subbilabiato, lobo intermedio labii inferioris margine incurvato longeque denticulato-ciliato.

Gloxinia ichthyostoma. *Gardn. Herb. Bras. n. 3304.*

HAB. In shady rocky places on dry calcareous hills near Arrial da Chapada, province of Goyaz, Brazil. January, 1840.

Herbacea, annua, erecta, hirsuta, 1-1½ pedalis. *Caules* simplices. *Folia* opposita, petiolata, 2½-3 poll. longa, 1½-2 pollices lata, subobliqua, grossè crenato-serrata, acuta, basi subcordata. *Petioles* 3 lineas circiter longi, dense hirsuti. *Pedicelli* solitarii, axillares, erecti, internodo triplo breviores. *Calycis tubus* ovario adnatus. *Limbus* 5-partitus, lobis lineari-lanceolatis patentibus. *Corolla* purpureo-violacea, extus pubescens, tubo infundibuliformi-campanulato basi ecalcarato, limbo subbilabiato 5-lobo, lobo intermedio labii inferioris margine incurvato longeque dentato-ciliato. *Stamina* 4, didynama et quintum rudimentarium. *Antheræ* inter se cohærentes. *Glandulæ* 5, perigynæ. *Stylus* versus apicem incrassatus. *Stigma* orbiculato-concavum.

The specific name which I have given to this species of *Gloxinia* was suggested by the very marked resemblance which the middle lobe of the lower lip of its corolla bears to the jaw of a fish. The same appearance exists, but in a slighter degree, in the original *Gloxinia maculata*.—*G. Gardner.*







TABS. CDLXXIII. CDLXXIV.

CLEISTES SPECIOSA. *Gardn.*

Labello convoluto truncato emarginato sepalorum longitudine, lamellis infra medium integris.

Cleisthes speciosa. *Gardn. Herb. Bras. n.* 4003.

HAB. Marshy places, in upland *campos* near Natividade, and between Natividade and Arrayas, province of Goyaz, Brazil, flowering from January till March.

The following description of this beautiful plant was drawn up from recent specimens.

Herbaceous, 3-4 feet high. *Root* fibrous, fibres succulent. *Stem* erect, fistular, leafy. *Leaves* between succulent and coriaceous, glaucous, finely striated with parallel veins, 5-6 inches long and about an inch and a half broad, oblong-lanceolate, their margins running down and meeting at a little more than an inch below the point where the middle part of the leaf separates from the stem. *Flowers* about 3 inches long, rose-coloured, solitary in the axils of the two or three upper leaves. *Sepals* patent, linear-lanceolate, acute. *Petals* conniving, lanceolate, with a prominent midrib on their internal surface, rose-coloured, but towards the tips sanguineous. *Labellum* free, convolute, oblong-linear, truncate, emarginate. *Crest* spongy, yellowish, towards the base becoming more fleshy, and considerably elevated above the disk. At each side of its base, but seated on the disk, there is a small roundish yellow gland. Like the other segments of the perianth the labellum is rose-coloured, except its upper third, which is of the same colour as the tips of the petals. *Column* clavate, semiterete, white, the upper part of its internal face of a papillose nature and yellowish. *Stigma* infundibuliform, its lateral margins toothed. *Anther* large, fleshy, terminal, operculiform, subbilobed, purple, suspended by a lobed process of the upper part of the back of the column. *Germen* sessile, fleshy, cylindrical, about 2 inches long.

This species is nearly allied to *C. rosea*, *Lindl.*, but is well distinguished by its truncate and emarginate, not acute, labellum, and by the crest being entire at and below the middle. I possess three other species from Brazil—one from the province of Goyaz, with long narrow leaves, my only specimen of which is too imperfect to be described, and the two following :

Cleisthes montana, (*Gardn. Herb. Bras. n.* 5879.) labello sepalorum longitudine trilobo lobis lateralibus lanceolatis acutis intermedio rotundato crispo integro, lamella per medium integra apicem versus denticulata.—HAB. In moist bushy places near the summit of the Organ Mountains, Brazil.

Cleisthes Miersii, (*Gardn. MSS.*), labello convoluto oblongo-lanceolato acuminato integerrimo margine undulato sepalorum longitudine, lamellis apicem versus lacerato-denticulatis.—HAB. At Tijuca, in the province of Rio de Janeiro, *John Miers, Esq., G. Gardner.*

Fig. 1. Labellum and column. *f. 2.* Base of the labellum. *f. 3.* Column. *f. 4.* Anther-case :—*magnified.*



Lindemianæ.

N. O. Rubiaceæ.

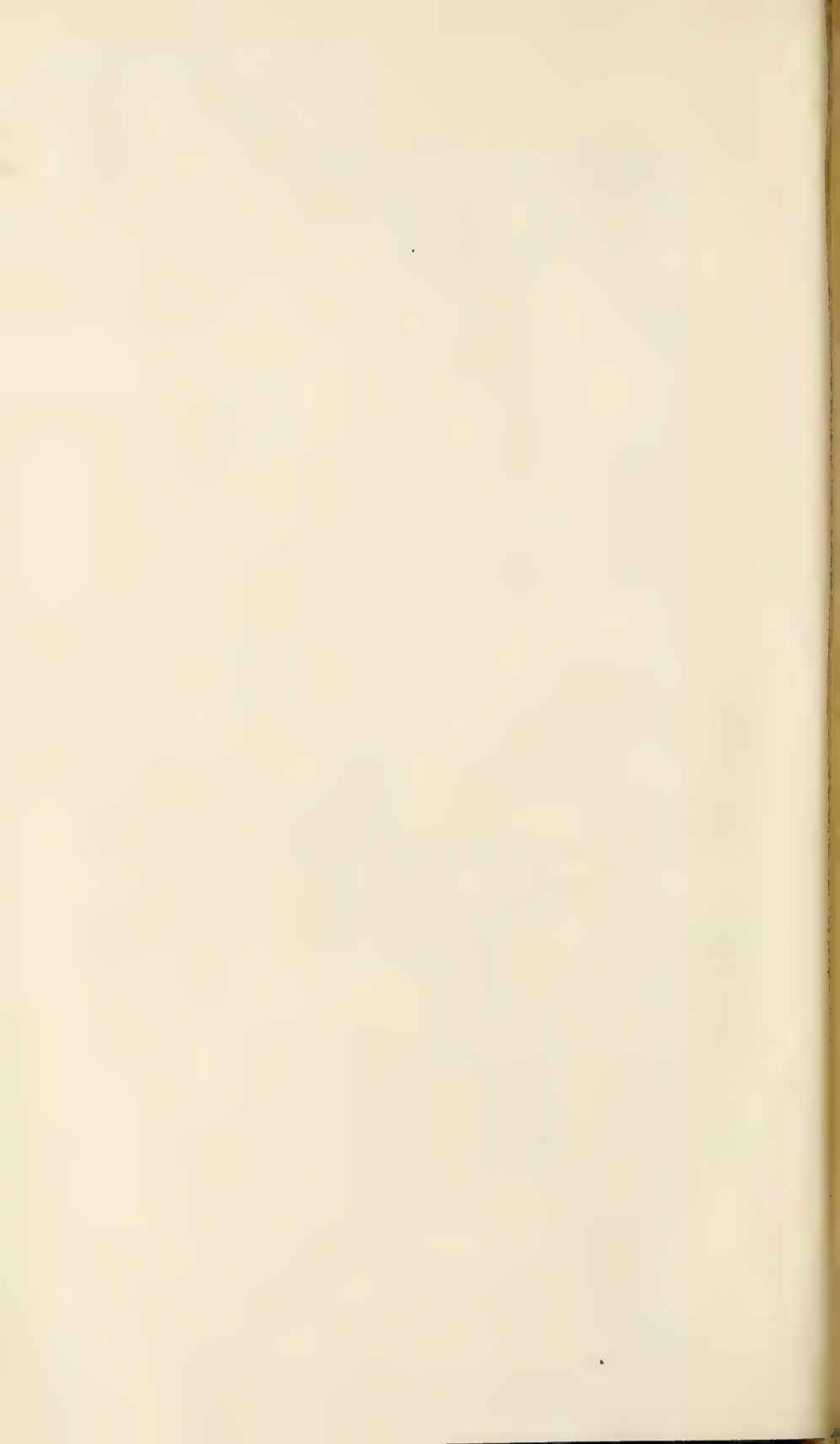
TAB. CDLXXV.

LINDENIA ACUTIFLORA.

Corollæ limbi laciniis acutis tubo 6-7-ies brevioribus.

HAB. Mexico. Puente-nacional, province of Vera Cruz, *Linden*.
n. 358.

This may possibly be a mere variety of the *Lindenia rivalis* figured in the following Plate; but in the specimens we have received from Mr. Linden, as well another presented to us by Mr. Harris, and gathered by Mr. Galeotti, the leaves are very much smaller and more downy, and the divisions of the limb of the corolla are nearly one third less and very much more pointed, although the tube is very nearly of the same length as in *L. rivalis*. *Bentham*.





TAB. CDLXXVI.

LINDENIA RIVALIS. Benth.

GEN. CHAR. *Calycis* *tubus* turbinatus, 5-costatus; *limbus* 5-partitus, laciniis angustis acutis. *Corolla* hypocrateriformis, tubo longissimo tenui æquali; limbo 5-partito, laciniis oblongis patentibus, æstivatione imbricatis. *Antheræ* 5, lineares, sessiles ad corollæ sinus. *Stylus* filiformis e basi glaber, apice incrassatus, brevissime bifidus, lobis intus stigmatiferis. *Capsula* laciniis calycinis coronata, bilocularis, placentis centralibus. Semina numerosissima angulata.—Frutices *Mexicani*. Folia *opposita*, *breviter petiolata*, *oblonga*, *ad apices ramorum conferta*. Stipulæ *utrinque solitariae*, *fusco-membranaceæ*, *acuminatæ*, *in vaginam brevem connatæ*, *deciduæ*. Corymbus *terminalis condensatus pauciflorus*. Bractææ *lineares*. Flores *subsessiles*, *albi*.

Lindenia rivalis; corollæ limbi laciniis obtusiusculis tubo 4-5-ies brevioribus. Benth. Pl. Hartw. 84.

HAB. Southern Mexico; on the banks of the river Teapa, *Linden, Herb. du Sud*, n. 331: Guatemala; on the banks of streams, La Vera Paz, *Hartweg*, n. 581.

This is a shrub of two or three feet high, resembling in many respects the Brazilian genus *Augustea*, but differing in the form of the corolla, of which the tube is long, slender and straight as in *Tocoyena*, without the inflated oblique throat of *Augustea*, the style is also perfectly smooth. In this the original species the leaves become at length nearly smooth and attain the length of three or four inches. The tube of the corolla is about five inches* long, and the divisions of the limb rather more than an inch. Bentham.

* In *Plantæ Hartwegianæ*, by a mistake in copying, it is said to be 5 to 5½ lines, instead of inches.





TAB. CDLXXVII.

COPTOPHYLLUM BUNIIFOLIUM. *Gard.*

GEN. CHAR. *Sporangia* ovata, vasculoso-reticulata, apice breviter radiatim striata, hinc longitudinaliter dehiscentia, biseriata, in laciniis frondis contractæ disposita. *Indusium* nullum. *Sporulæ* subtriangulares, striatæ, glabræ.—*Filiculæ Brasilianæ*, rhizoma *repente*. Frondes *cæspitosæ*, *dissimiles*; steriles *multifida*, *pinnulis linearibus dichotomis*; fertiles *tripinnatæ*, *pinnulis sporangiferis, contractis*; venæ *furcatæ*.—*Gard. in Hook. Lond. Journ. Bot. 1, p. 133.*

Coptophyllum buniifolium; glabrum, fronde sterili ovata multipartita, laciniis elongatis dichotomis, fertili laxè paniculata. *Gard. l. c.*

Anemia dichotoma. *Gard. Herb. Bras. n. 4084.*

HAB. Among the *débris* of schistose rocks on the summit of the Serra de Natividade, in the north of the province of Goyaz, Brazil.

This and the following elegant little Fern, I have separated from the genus *Anemia*, principally on account of their fertile fronds rising distinctly from the rhizoma; and being in no way connected with the stipes of the barren fronds. This latter circumstance characterizes the true *Anemias*, for in them the frond which bears the spikes of fructification is formed by the union of two fertile fronds with one barren one. Since my papers in the *Journal of Botany* were written, I have examined the anatomical structure of the fertile frond of *Anemia Phyllitidis*, Sw., and I find that three nearly distinct bundles of annular ducts can be traced to the top of the stipes, where they at last separate, one running into the barren, and one into each of the fertile portions. Link, I find, entertains similar views on the structure of *Anemia*.—*G. Gardner.*

Fig. 1. Sporangium. f. 2. Sporules:—*magnified.*



TAB. CDLXXVIII.

COPTOPHYLLUM MILLEFOLIUM. *Gardn.*

Villosum, frondes terili oblonga vel ovato-oblonga multipartita, laciniis brevibus linearibus dichotomis, fertili elongata coarctata.

Coptophyllum millefolium. *Gard. in Hook. Lond. Journ. Bot. vol. I, p. 133.*

Anemia millefolium. *Gard. Herb. Bras. n. 4083.*

HAB. Rare on dry arid hills near Villa de Arrayas, in the north of the province of Goyaz, Brazil.

No one, at first sight, would believe the barren fronds of the two plants which constitute the genus *Coptophyllum*, to belong to the tribe of *Ferns*, resembling, as they do, much more the leaves of some species of *Umbelliferæ*. The developement of parenchyma is here nearly reduced to its minimum, and consequently the dichotomous venation of the leaf is most beautifully and distinctly exhibited.—*G. Gardner.*

Fig. 1. Sporangium. f. 2. Sporules :—all magnified.



TAB. CDLXXIX.

IPOMÆA (STROPHIPOMÆA) GOYAZENSIS. *Gardn.*

Glaberrima, foliis late ovatis subtriangularibusve acutis basi profunde cordato-bilobis lobis approximatis, pedunculis trifloris, calycis glabri laciniis oblongis obtusis, corollæ tubo infundibuliformi limbo patente quinquelobo lobis emarginatis.

Ipomæa Goyazensis. *Gard. Herb. Bras. n.* 3909.

HAB. Rare, among bushes at the foot of the Serra de Santa Brida, province of Goyaz, Brazil.

Tota glaberrima. *Caules* teretes, volubiles. *Folia* alterna, petiolata, 3-5 poll. longa, 2-3½ poll. lata, majora subtriangularia, minora rotundato-ovata, apice acuta, basi profunde cordato-biloba, lobis approximatis, supra viridibus, subtus pallidioribus. *Petiolus* unciam longus, supra canaliculatus. *Pedunculi* axillares, breves, triflori. *Pedicelli* inæquales, intermedio longitudine circiter calycis, lateralibus brevioribus. *Calycis* foliola subæqualia, oblonga, obtusa, concava. *Corollæ* tubus albus, infundibuliformis, limbo violaceo, patente, 5-lobo, lobis emarginatis. *Stamina* erecta, tubo inclusa.

This very beautiful species of *Ipomæa* I only met with once, and then but sparingly in flower. It would be a most desirable object for cultivation, the tube of the corolla being pure white, while the limb is of a rich violet colour.—*G. Gardner.*



TAB. CDLXXX.

ACHIMENES RUPESTRIS. *Gardn.*

Suffruticosa, caule erecto glanduloso-villoso, foliis ternatim verticillatis breve petiolatis ovatis serratis acutis vel subacuminatis basi rotundatis utrinque glanduloso-pilosis, pedicellis axillaribus solitariis 1-floris, calycis 5-partiti lobis oblongis obtusis erectis, corollæ limbo amplo patente, lobis rotundatis.

Achimenes rupestris. *Gardn. Herb. Bras. No. 3874.*

HAB. In clefts of rocks near the summit of the Serra de Natividade, province of Goyaz, Brazil. Feb. 1840.

Suffrutex pedalis, ubique glanduloso-pilosus. *Folia* ternatim verticillata, breve petiolata, 2 poll. longa, 12-16 lin. lata, ovata, serrata, acuta vel subacuminata, basi rotundata. *Calycis* tubus ovario adnatus; *limbus* 5-partitus, lobis oblongis, obtusis, erectis. *Corolla* pallide purpurea, tubo infundibuliformi, limbo amplo patente, 5-fido, lobis integris rotundatis. *Stamina* 4 didynama; antheris inter se cohærentibus.—
G. Gardner.



TAB. CDLXXXI.

ANTIDESMA ALNIFOLIUM.

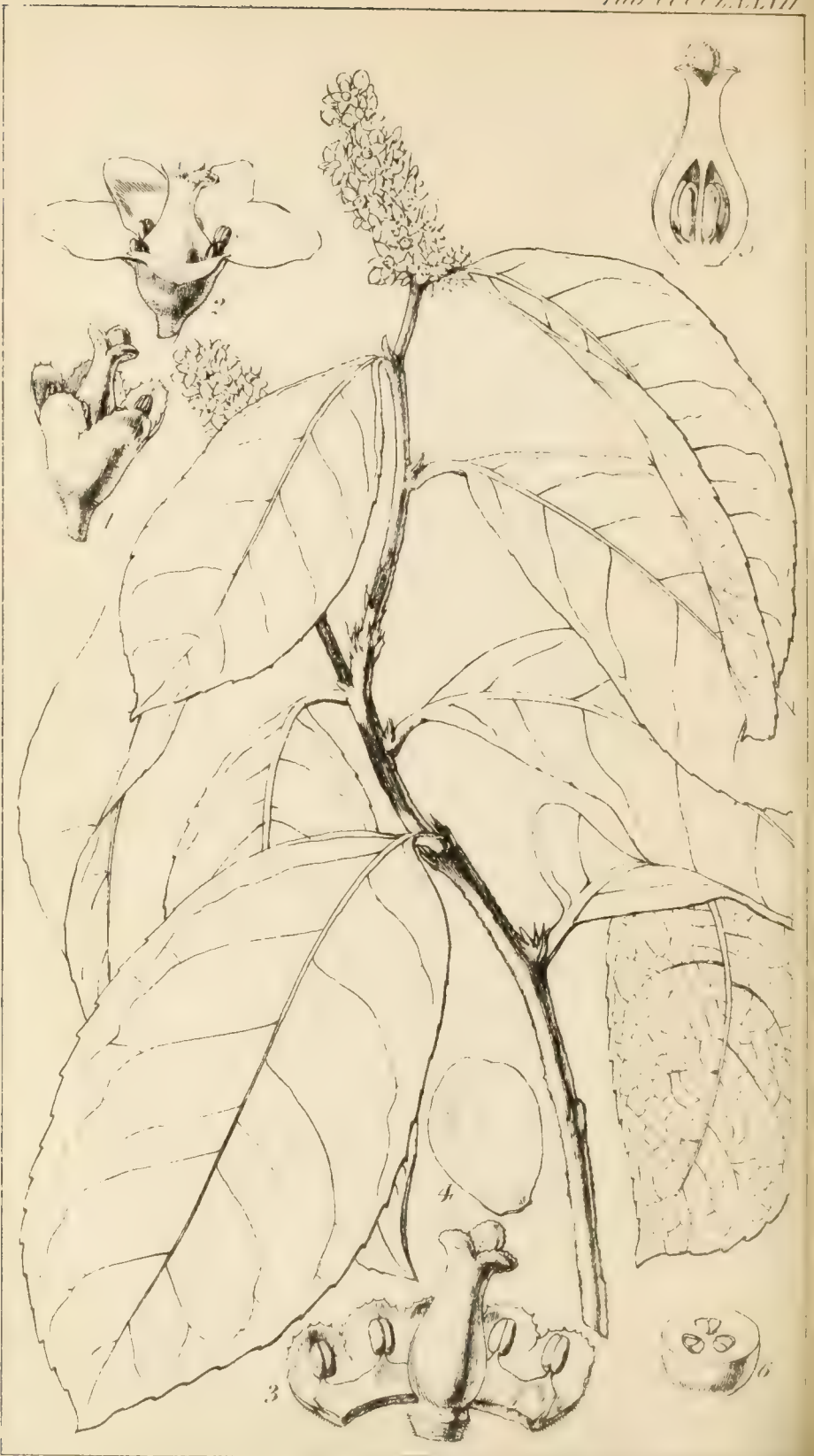
Glabrum, foliis cordato-v. cuneato-rotundatis 3-5-nerviis grosse dentato-serratis, spicis axillaribus pilosis, masculis compositis, fœmineis simplicibus.

HAB. Eastern part of the Colony, Cape of Good Hope, *Mr. Bowie*; Port Natal, *Mr. Krauss*, *Herb. n.* 160.

It was my desire to give a name to a shrub that had been long cultivated at Kew, which induced me to figure and describe the present plant from very imperfect specimens, and of which only the *female* plant with immature ovaries, was known to me. This is a branching shrub, about 3 feet high, with the leaves variable, but not much unlike those of the Alder, the spikes of flowers axillary, scarcely longer than the petiole. The flowers clustered within small bracteas and sessile on the rachis. The perianth closely surrounding the germen, 5 to 6 cleft, the teeth obtuse. Germen ovate, styles 3; stigmas obtuse.—Long after the engraving was executed, I detected a *male* specimen of the same plant in Mr. Krauss' collection from Port Natal. Its spikes are long and compound, almost as long as the leaves. Flowers scattered, sessile. Perianth of 8 to 10 oblong segments, which are alternately smaller. Filaments 10 to 12, much exserted, with long hairs on the lower half. Anthers 2-celled, the lobes or cells rounded, spreading. Pistil none, but there are 3 or 4 fleshy glands at the base of the stamens. These male flowers are very small and not in perfect condition, being more or less eaten by insects; so that this account of the fructification is necessarily incomplete, too much so to allow of my saying with certainty that it is an *Antidesma*. The ovary is so imperfect and minute, that it is difficult to distinguish its internal structure. It was believed to be 3-celled by the artist; but the representation is probably erroneous.

TAB. CDLXXXI. Female branch of *Antidesma alnifolium*. *Fig. 1.* Portion of a female spike. *f. 2.* Single flower. *f. 3.* The same with the perianth laid open. *f. 4.* Section of the ovary, but probably erroneously represented with 3 cells:—*magnified.*





TAB. CDLXXXII.

CELASTRUS SUBSPICATUS.

Frutex glabra, ramis subverrucosis, foliis ovali-ellipticis acutis subcoriaceis serratis brevi-petiolatis, racemis compositis spicatis terminalibus rarissime axillaribus.

HAB. ——— ?

This is another plant, which like the *Antidesma alnifolium*, has been long cultivated in the Royal Botanical Gardens of Kew, and which flowers every summer, but of the history of which nothing is known; and it appears to be an undescribed species of *Celastrus*. The plant is 4 or 5 feet high, the branches flexuose and straggling, the leaves subcoriaceous, alternate, oval-elliptical, rather obscurely serrated, acute, paler and more conspicuously reticulated beneath; every where glabrous. The petioles are short, and in their axils are gemmæ with sharp, almost subulate, scales. The flowers are on short pedicels, and arranged in a compound mostly terminal spike or rather raceme, rarely axillary. Calyx cup-shaped, with 5 deep, rounded, obscurely denticulated lobes. Petals 5, obovate. Stamens 5, short, alternating with the petals, arising from a perigynous disc which lines the lower half of the calyx. Germen ovate, 3-celled, each with 2 ovules. Style short, thick. Stigmas 3, large, glandular.

Fig. 1. Flower from which the petals have been removed. *f. 2.* Entire flower. *f. 3.* Flower of which the calyx is laid open, and the petals removed. *f. 4.* Petal. *f. 5.* Vertical section of the pistil. *f. 6.* Transverse section of the germen:—*magnified.*



TAB. CDLXXXIII.

OXYRIA ELATIOR.

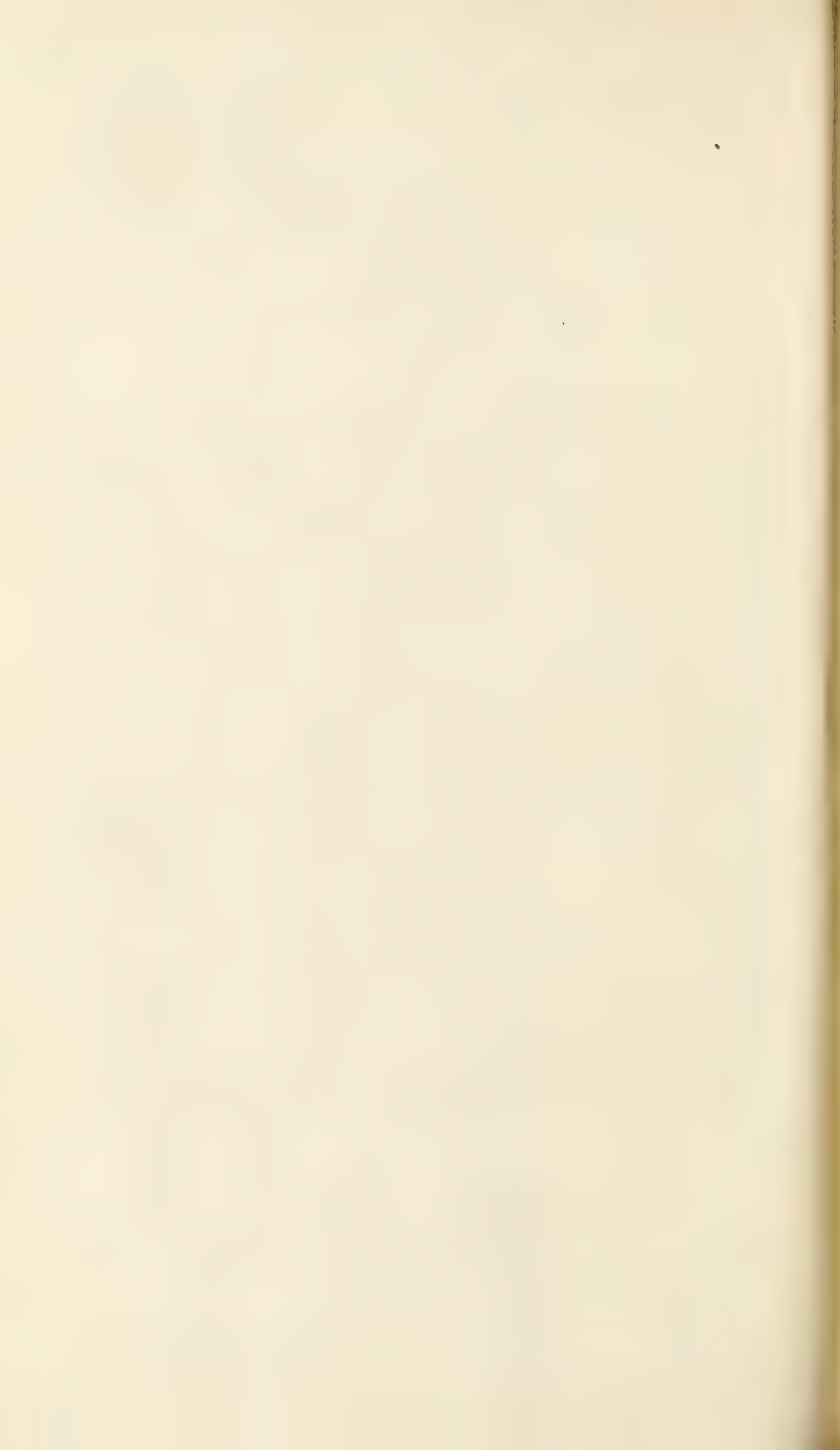
Caule aphylo elato superne ramoso, racemis paniculatis, verticillis 6-12-floris, pedicellis fructiferis reflexis achenio sub brevioribus, sepalis interioribus obovato-subspathulatis obtusissimis, achenii suborbicularis alis membranaceis transverse venosis utrinque profunde cordato-incisis, foliis radicalibus longe petiolatis reniformibus margine obsolete crispato-undulatis. *Meisn.*

Oxyria elatior. *Brown in Wall. Cat. n. 1726. Meisn. in Wall. Plant. Asiat. Rar. v. 3, p. 64.*

HAB. The mountains of Emodi in Kamoun, (*Blinkworth.*) *Dr. Wallich.*

I am indebted for native specimens of this plant to Dr. Wallich; the living cultivated specimens, from which our figure is taken, were sent to me from the noble gardens of His Grace the Duke of Northumberland, at Syon House. Meisner well observes of it "*Oxyria reniformi*, Hook., nimis affinis, et vix differt, nisi statura altiore, sesquipedali, racemis longioribus magisque paniculatis, sepalis interioribus (i. e. erectis) apice dilatatis, obtusissimis, subtruncatis, paullo majoribus, fructus ala apice basique ad semen usque incisa (in *O. reniformi* autem subintegra v. basi tantum cordata.)" It retains its characters in cultivation; yet I can hardly believe it distinct from our *O. reniformis* of Europe and of N. America. From the latter country, at Sitka, on the Pacific side, I possess specimens $2\frac{1}{2}$ feet high; and others nearly as tall from the Rocky Mountains.

Fig. 1. Cluster of flowers. *f. 2.* Single flower. *f. 3.* The same laid open. *f. 4.* Pistil. *f. 5.* Capsule:—*magnified.*





TAB. CDLXXXIV.

SAUVAGESIA DEFLEXIFOLIA. *Gardn.*

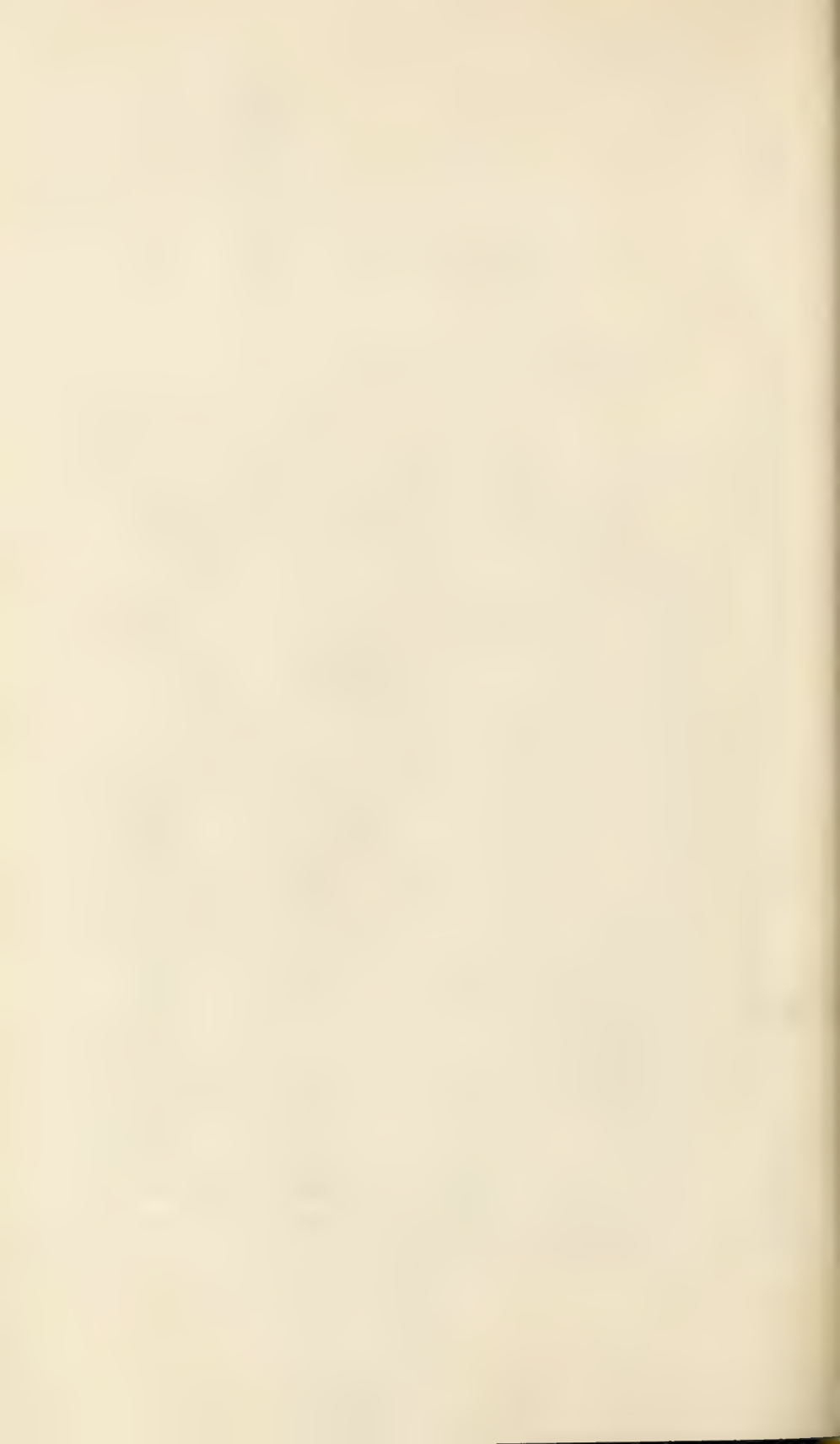
Fruticosa, caule erecto versus apicem ramoso, foliis deflexis lineari-lanceolatis marginatis subserratis acuminatis, stipulis subulatis setoso-pectinatis, pedicellis solitariis erectis, sepalis ovato-oblongis aristato-acuminatis supra medium subserrato-ciliatis, petalis obtusis.

Sauvagesia deflexifolia. Gardn. Herb. Bras. n. 3008.

HAB. Rare in a moist sandy upland campo near the mission of Duro, province of Goyaz, Brazil, Oct. 1839.

Caulis fruticosus, erectus, ad apicem ramosus, pedalis. *Folia* demum deflexa, alterna, vix petiolata, 4 lin. circiter longa, lineari-lanceolata, subserrata, acuminata, pellucido-marginata. *Stipulæ* subulatæ, setoso-pectinatæ, persistentes. *Flores* solitarii, axillares, pedunculati, pedunculis 2 lin. longis simplicibus, erectis, nunquam deflexis. *Calyx* quinquepartitus; sepalis ovato-oblongis, aristato-acuminatis, supra medium subserrato-ciliatis, margine scariosis. *Petala* 5, hypogyna, æqualia, obovata, obtusa, alba. *Stamina* hypogyna. *Staminodia* exteriora 10 spathulato-oblonga, interiora 5 petaloidea, petalis opposita. *Filamenta* fertilia 5, brevissima, staminodiis petaloideis basi adhærentia: *antheris* oblongis bilocularibus, loculis lateraliter dehiscentibus. *Ovarium* liberum, uniloculare. *Stylus* simplex. *Stigma* obtusum. *Capsula* ovato-oblonga, trivalvis. *Semina* plurima ad suturas valvarum biseriata.—*G. Gardner.*

Tab. CDLXXXIV. A fruit-bearing specimen of *Sauvagesia deflexifolia*. *Fig. 1.* Fruit. *f. 2.* Leaf and stipules. *f. 3.* Capsule, with the calyx removed:—*magnified.*





TAB. CDLXXXV.

CHILIOTRICHUM AMELLOIDES. Cass.

GEN. CHAR. *Capitulum* multiflorum, *fl. radii* ligulatis fœmineis uniseriatis, disci 5-dentatis hermaphr. *Invol. squamæ* imbricatæ oblongæ acutæ. *Recept.* convexum, paleis linearibus apice barbatis inter flores onustum. *Stigmata fl. disci* subulato-lineararia elongata pubera. *Achænia* gracilia cylindræa angulato-striata. *Pappus* pluriserialis, setis filiformibus inæqualibus persistentibus.—Frutices in *extremâ Amer. Austr. spontanei parvi ramosi*. Folia *alterna sessilia coriacea integerima, margine revoluta, supra glabra subtus plus minus tomentosa*. Pedunculi *solitarii 1-cephali tomentosi*. Ligulæ *albæ subtus purpurascens*.

Chiliotrichum amelloides; foliis oblongo-ovatis basi angustatis planiusculis.

Chiliotrichum amelloides, Cass. *Dict.* 8, p. 576. De Cand. *Prodr.* 5, p. 216.

Amellus diffusus, *Forst. Comm. Goet.* 9, p. 39.

Tropidolepis diffusa, *Tausch, in Flora* 12, p. 68.

Aster Magellanicus, *Spreng. Syst.* 3, p. 526.

β. lanceolatum, (TAB. NOSTR. CDLXXXV.), foliis lanceolatis acutis basi attenuatis. *DeCand.*

γ? rosmarinifolium, Nees foliis linearibus intensius margine revolutis basi non angustatis.

Amellus rosmarinifolius. *Poepp. Exs.*

Ch. rosmarinifolium. *Less. in Linnæa*, 1831, p. 109. An species propria? (*De Cand.*)

HAB. Straits of Magellan, *Forster*; Cape Horn, Staten Land, *Dr. Eights*, (in *Herb. Nostr.*)—*β.* Falkland Islands, *D'Urville* and *Gaudichaud*. *Mr. Wright*, (in *Herb. Nostr.*)

This is perhaps one of the tallest shrubs in the Falkland Islands. *Gaudichaud* speaks of it as from 3 to 5 feet high, and *Mr. Wright* as 8 to 10 feet. The flowers are numerous, the ray pure white.

Fig. 1. Receptacle. *f. 2.* Floret of the disk with its scale. *f. 3.* Hairs of the pappus. *f. 4.* Floret of the ray:—*magnified*.





TAB. CDLXXXVI.

ASTER VAHLII. *Hook. et Arn.*

Herbaceus glaberrimus parce ramosus, foliis lineari-lanceolatis integerrimis obtusiusculis basi semiamplexantibus infimis spathulatis basi subvaginantibus subserratis, capitulis solitariis, involucri pauciserialis foliolis glaberrimis imbricatis linearibus acutis, radio purpureo, pappo cinereo, achenio villosa.

Aster VahlII. Hook. and Arn. Contr. to Fl. of S. Am. in Hook. Comp. Bot. Mag. p. 49.

Erigeron VahlII. Gaudich. Fl. Isles Malouines, in Ann. des Sc. Nat. v. 5, p. 103. De Cand. Prodr. 5, p. 295.

HAB. Falkland Islands. *C. Darwin, Esq., Mr. Wright*; Cape Negro, Straits of Magellan, *C. Darwin, Esq.*; Andes of Chili, *Dr. Gillies*; Valdivia, *Mr. Bridges, (n. 623)*; Chiloe, *Cuming, (n. 55.)*

Nearly allied to *Aster alpinus*, but at once distinguished by the glabrous leaves and stem, and involucre. Achenia sulcated, hairy.

Fig. 1. Floret of the disk. f. 2. Ditto of the ray. f. 3. Hairs of the pappus:—magnified.



TAB. CDLXXXVII.

CHEILANTHES MONTICOLA. *Gardn.*

Frondebis pinnatis, pinnis oblongis obtusis crenatis glabris, basi superiore auriculatis.

Cheilanthes monticola. *Gardn. Herb. Bras. n.* 3557.

HAB. On the perpendicular face of Schistose rocks, in a deep narrow ravine near the summit of the Serra de Natividade, province of Goyaz, Brazil. January, 1840.

Radix fibrosa, fibrillis pilosis. *Rhizoma* parvum, subglobosum. *Frondes* plures, fasciculatæ, pinnatæ. *Stipes* vix pollicaris, atro-fuscus, hispidus, semiteres, supra canaliculatus. *Frons* 3-4 pollicaris. *Rachis* filiformis, glaber. *Pinnæ* alternæ, sessiles, 5 lin. longæ, oblongæ, obtusæ, crenatæ, glabræ, basi sursum auriculatæ, deorsum subtruncatæ. *Venæ* internæ, pinnatæ, furcatæ, venulisque divergentes, apice soriferæ. *Sori* marginales, oblongi. *Indusia* oblonga, membranacea, albida. *Sporangia* pedicellata, obovata, annulo fere completo cincta. *Sporulæ* subrotundæ, sub lente scabrellæ.

The only other species of *Cheilanthes* with simply pinnated fronds is *C. micropteris*, Sw., from the Andes of Peru. It differs from the present plant by its more slender habit and nearly rounded hairy pinnæ.—*G. Gardner.*

Fig. 1. Pinna. *f. 2, 3.* Sporangia. *f. 4.* Sporules:—*magnified.*





TAB. CDLXXXVIII.

SCOLOPENDRIUM LINDENI.

Fronde lineari-oblonga obtuse attenuata integerrima basi cordata sublonge stipitata, stipite superne costâque inferne subtus ferrugineo-lanatis, venis ad basin bifurcatis venulis seu ramis liberis.

HAB. On old oaks, Chamulars, Prov. Chiapas, Mexico. *Linden, Herb. Mex. n. 1543.*

Caudex — ? *Stipes* subbiuncialis, superne squamis angustis subulatis ferrugineis lanosus. *Frons* vix spithamæa, $\frac{3}{4}$ unc. lata, lineari-oblonga, coriaceo-membranacea, integerrima, marginata, apice obtuse attenuata, basi cordata, superne glaberrima, subtus, præcipue ad costam basin versus, ferrugineo-lanosa. *Venæ* usque ad basin furcatæ; *venulæ* approximatae, parallelæ, oblique horizontales, simplices, apicibus paulo infra marginem liberis clavatis; *venula* superiore et *venula* inferiore mox superioris *venæ* soriferis. *Sori* lineares longitudine variabiles.

This would be a true *Scolopendrium* of Presl, having the veinlets free at the apices, not there connected by reticulated veinlets as in his *Antigramma*. As a species it is quite different from any described one; but its nearest affinity is perhaps with *S. longifolium* of Presl (Reliq. Hænk. p. 48, t. 9, f. 1.), a native of Luzon. That, however, has much longer fronds, is quite glabrous, and tapers at the base into the stipes.

Fig. 1. Portion of the fructified frond. *f. 2, 3.* Sporangia. *f. 4.* Sporules. *f. 5.* Scale from the costa:—*magnified.*



TABS. CDLXXXIX (AND CDXC.)

GUNNERA (Misandra) FALKLANDICA.

Dioica omnino apetala repens ferrugineo-hirsuta, pilis nunc deciduis, foliis reniformi-cordatis sublobatis crenatis petiolum subæquantibus, scapis folio brevioribus, floribus masc. et fœm. in spicam ovatam dense glomeratis, perianthiis glaberrimis.

Misandra Magellanica. *Gaud. in Ann. des Sc. Nat.* 5, p. 89. (*vix* Gunnera Magellanica, *Lam. Dict. v.* 3, p. 61, t. 801, f. 2.)

HAB. Falkland Islands. *Gaudichaud, Mr. Wright.*

Whether or not I am correct in considering this distinct from *G. Magellanica* of the Straits of Magellan, must be left for more copious specimens and further observations to determine. I possess in my herbarium, from Valdivia, gathered by Mr. Bridges, (n. 647 of his herbarium,) what I consider to be the plant of Lamarck. It has leaves almost wholly glabrous; and petioles, even while the inflorescence is young, from 8 inches to a foot long, with the blade of the leaf shorter, broader, and exactly reniform, and the perianths (at least of the female, for I have not seen the male flower) very downy. Our present plant may also inhabit the Straits of Magellan as well as the Falkland Islands; for Mr. Bennett, in his valuable remarks on *Gunnera*,* observes, "Of *Misandra*, two species (both collected by Sir Joseph Banks and Dr. Solander) inhabit the dreary mountains of Tierra del Fuego; only one of these has yet been published." There exists, as is well known, so great a similarity between the vegetation of the Falkland Islands and that of Tierra del Fuego, that it is probable ours may be the 2nd species alluded to by Mr. Bennett. In the youngest of my flowering specimens I have been able to detect no petals to the male flowers; nevertheless I do not hesitate in thinking with Mr. Bennett and Endlicher that *Misandra* cannot generically be distinguished from *Gunnera*. The fruit is bright red and fleshy, each containing a small compressed stone. But the exact structure of the seed and embryo I have not been able to observe.

TAB. CDLXXXIX. *Fig.* 1. Male Plant; *nat. size.* *f.* 2. Small branch of male flowers; *magnified.* *f.* 3. Female plant; *nat. size.* *f.* 4. Female flower; *magnified.*

* *Plantæ Javanicæ rariores*, p. 74.





Wrightianæ.

N. O. Gunneraceæ.

TAB. CDXC.

GUNNERA (Misandra) FALKLANDICA.

(Female Plant, noticed in the previous description.)

TAB. CDXC. Female Plant, with nearly mature fruit.

Fig. 1. Single fruit, with the dark purple styles still remaining.

f. 2. A drupe, cut through vertically. *f. 3.* Stone of the drupe:

—*magnified.*



TAB. CDXCI.

HOMOIANTHUS ECHINULATUS. *Cass.*

Frutescens ramosus, caule ascendente tereti glabro dense folioso, foliis coriaceis basi dilatata semiamplexicaulibus linearibus subrecurvis siccitate transversim rugosis echinulatis, pedunculo terminali solitario folioso monocephalo, involucri squamis subtriserialibus oblongo-linearibus, ext. spinuloso-ciliatis, int. margine membranaceis.

Homoianthus echinulatus. *Cass. Dict.* 38, p. 458. *De Cand. Prodr.* 7, p. 65.

Perdicium recurvatum. *Vahl. Act. Soc. H. N. Hafn.* 1, p. 13, t. 7. *Gaudich. in Ann. des Sc. Nat.* v. 5, p. 105. (not *Don*, nor *Poepp.*)

Chætanthera recurvata. *Spreng. Syst.* 3, p. 503.

Perezia recurvata. *Less. in Linnæa*, 1830, p. 21. *Less. Syn.* p. 412. *Hook. et Arn. in Comp. to Bot. Mag.* v. 2, p. 42.

HAB. Falkland Islands. *Gaudichaud*, *Mr. Wright*; Straits of Magellan, *Commerson*, *Mr. Darwin*, *Capt. King*.

One of the most beautiful plants of the Falkland Islands, growing in peaty soil among rocks in large tufts, copiously branched, the branches bearing large, bright blue, very fragrant, flowers. The leaves, at least in a dry state, are singularly transversely wrinkled, and have their margins bent back so as almost to meet at the midrib.

Fig. 1. Leaf. *f.* 2. Involucre cut through, showing the receptacle. *f.* 3. Floret. *f.* 4. Hair from the pappus. *f.* 5. Tubular portion of the same, laid open to show the stamens and style. *f.* 6. Apex of style and stigmas :—*magnified.*





TAB. CDXCII.

BOLAX GLEBARIA. *Comm.*

Bolax Glebaria. Comm.—*Gaudich. in Ann. des Sc. Nat.* 5, p. 104, t. 3. f. 2. *De Cand. Prodr.* 4, p. 78.

Hydrocotyle gummifera. Lam. Dict. 3, p. 156, t. 189, f. 2? (*fig. mala.*)

Bolax gummifer et complicatus. Spreng. Syst. Veget. vol. 1, p. 879.

Azorella cæspitosa. Vahl, Symb. 348.

HAB. Straits of Magellan. *Commerson*; Falkland Islands, *Gaudichaud*, *Mr. Wright*; Chili and Patagonia, (*De Candolle.*)

Among some interesting drawings of Falkland Island scenery, brought home by Mr. Wright, a remarkable feature in the country is due to the frequent occurrence of the singular rounded and very compact tufts of this little Umbelliferous plant. "What can be more surprizing, in speaking of the vegetation of these islands," says D'Urville, "than the enormous tufts of *Bolax*? At first, their form resembles small mole-hills covered with green turf; but annually their young shoots, continually renewed, augment their original dimensions, till at length the mass attains a diameter and a height of many feet!" "It is an umbelliferous plant," he continues, "almost microscopic, respecting the nature of which the most experienced eye is apt to be deceived, so much is its appearance at variance with the usual aspect of the family to which it belongs. A resinous substance, of most powerful odour, exudes from every part of the plant and announces its presence from a distance." Mr. Wright speaks of the tufts being so large as to resemble small hay-stacks. The root is very long and tapering, perennial; branches numerous, dichotomous, proliferous. I find two varieties; the one which alone I have seen with fructification, has excessively dense and small foliage (f. 4-8) and is quite glabrous on the outside of the leaves, stellato-pubescent within; the other (f. 1-3) has larger leaves, stellato-pubescent on both sides; all are trifid, concave, with large concave sheathing glossy bases. Umbels sessile, 3-4-flowered. Leaves of the involucre ovate, entire, with sheathing bases (f. 6.)

Fig. 1. Larger var. of *Bolax Glebaria*, *nat. size.* f. 2, 3. Leaves, *magnified.* f. 4. Tuft of the smaller var. with scarcely mature fruit, *nat. size.* f. 5. Leaf. f. 6. Umbel. f. 7. Fruit. f. 8. Transverse section of ditto, *magnified.*



TAB. CDXCIII.

SENECIO LITTORALIS. *Gaudich.*

Caule erecto superne præcipue ramoso tereti, foliis sessilibus lineari-lanceolatis pungenti-acutis marginibus revolutis basi dilatatis semiamplexicaulibus, ramis foliosis monocephalis, capitulis radiatis, involucri calyculati squamis circiter 20 lineari-lanceolatis disco æqualibus, floribus disci 30-40, ligulis 12-14, receptaculo convexo nudo.

Senecio littoralis. *Gaudich. in Ann. des Sc. Nat.* 5, p. 104. *De Cand. Prodr.* 6, p. 413.

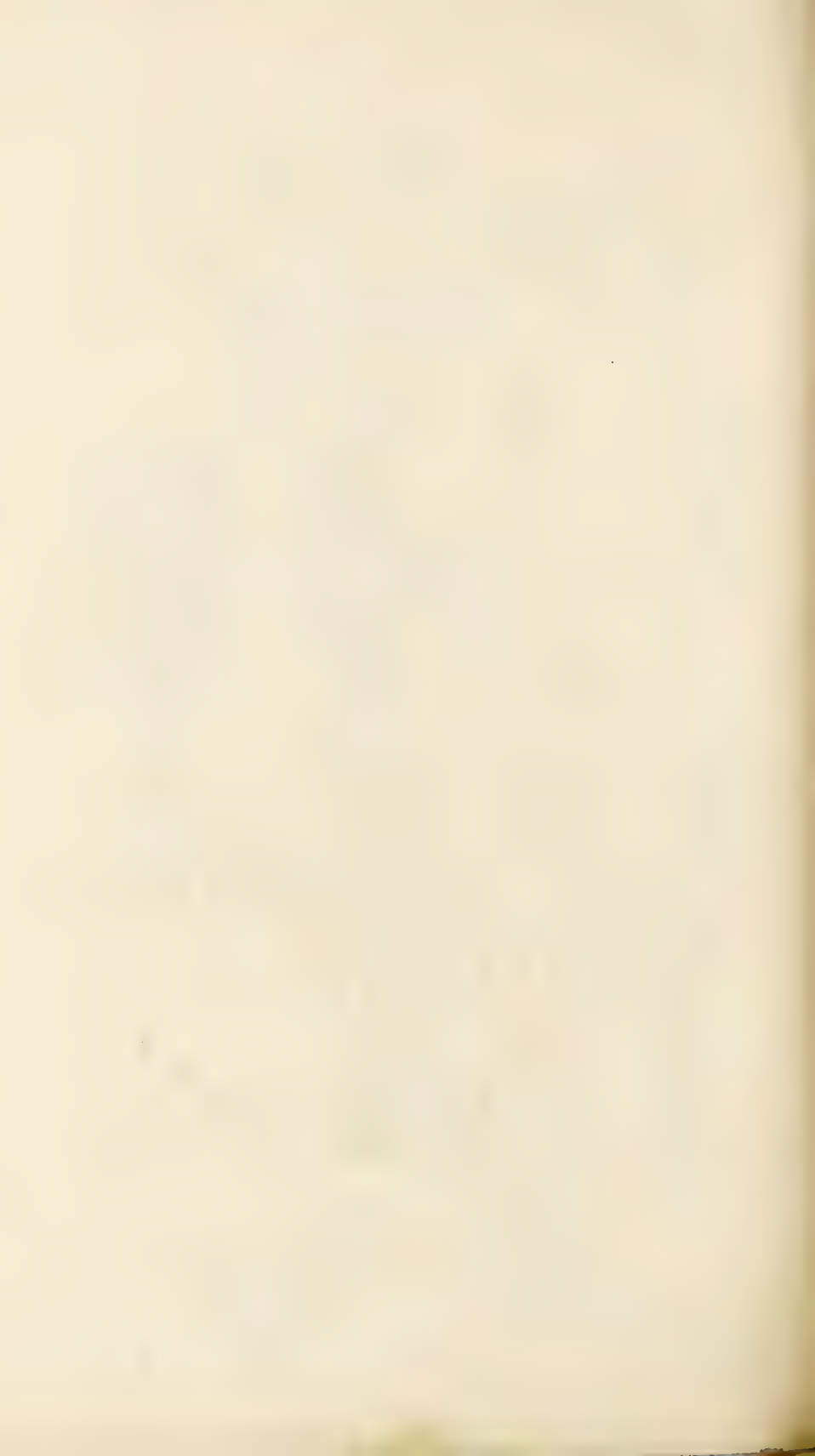
α. lanatus; foliis ramisque albo-tomentosis. *Gaudich. l. c.*

β. glabratus; foliis glabris. *Gaudich. l. c.* (TAB. NOST. CDXCIII.)

HAB. Falkland Islands. *Gaudichaud, Mr. Wright.*

The specimen here represented has leaves glabrous or nearly so; but about the branches and particularly about the leaves is an arachnoid wool, which looks as if, in the early state, it had covered the whole of the stem, branches and involucre; the *α.* of *Gaudichaud* is woolly all over. Perhaps *S. vaginatus*, Hook: and Arn. Fl. of S. Am. in Journ. of Bot. v. 3, p. 331, should be referred to this species.

Fig. 1, 2. Upper and under side of a leaf. *f. 3.* Involucre cut through to show the receptacle. *f. 4.* Floret of the disk. *f. 5.* Hair from the pappus. *f. 6.* Floret of the ray:—*magnified.*





TAB. CDXCIV.

OXALIS ENNEAPHYLLA. *Cav.*

Acaulis, radice bulbifera squamosa, petiolis longissimis, foliolis 9-20 cuneato-oblongis profunde bilobis subpilosis obtusis, scapis unifloris petiolo longioribus sub florem bibracteatis, sepalis oblongis villosis apice bipunctatis, staminibus longioribus stylos hirsutos superantibus.

Oxalis enneaphylla. *Cav. Ic. v. 5, p. 7, t. 411. De Candolle Prodr. 1, p. 702. Gaudich. in Ann. des. Sc. Nat. 5, p. 105.*

β. pumila; minor magisque pilosa.

Oxalis pumila. *Gaudich. in Freyc. Voy. 1, p. 137.*

HAB. Falkland Islands. *Née, Gaudichaud, Mr. Wright.*

This must be a very handsome plant, with its copious foliage and large showy white flowers. Its acid property is well known in its native country. Pernetty calls the plant "*Vinaigrette*," and Mr. Wright speaks of it as eaten in pies, and used instead of apple sauce.

Fig. 1. Calyx with stamens and pistil. *f. 2.* Stamens and pistil. *f. 3.* Pistil:—*magnified.*



Wrightianæ.

N. O. Rosaceæ.

TAB. CDXCV.

RUBUS GEOIDES. *Sm.*

Caulibus repentibus petiolisque filiformibus, foliis trisectis lobo terminali maximo ovato obtuso irregulariter serrato lateralibus minimis sæpe nullis aut cum terminali coalitis, pedunculis solitariis unifloris petiolo multo brevioribus.

Rubus geoides. Sm. Ic. Ined. t. 19.

Dalibarda geoides. Pers.—De Cand. Prodr. 2, p. 568.

HAB. Straits of Magellan. *Commerson*; Falkland Islands, *Gaudichaud, Mr. Wright.*

Sir James Smith was only acquainted with the flowering state of this plant. My specimens from Mr. Wright are in fruit, but they confirm the views of Sir James Smith respecting its genus; for it is entirely the fruit of a *Raspberry*, being very juicy, transparent, and delicious to the taste. The flavor Mr. Wright describes as between a Raspberry and Strawberry. Our flowering specimen is copied from Sir James Smith's figure, in order that our representation may be the more complete.





TAB. CDXCVI.

CHABRÆA SUAVEOLENS. DC.

Tota præsertim ad apicem lanuginosa, caule simplici folioso monocephalo, foliis radicalibus oblongis obtusis pinnatifidis sensim in petiolum longum attenuatis lobis approximatis rotundatis caulinis semiamplexicaulibus lanceolatis acuminatis superioribus integerrimis, involucri squamis lineari-oblongis lana immersis, Stam. filamentis superne glanduliformibus.

Chabræa suaveolens. De Cand. *Prodr.* 7, p. 59.

Perdicium suaveolens. Gaudich. in Freyc. *Voy.* p. 125.

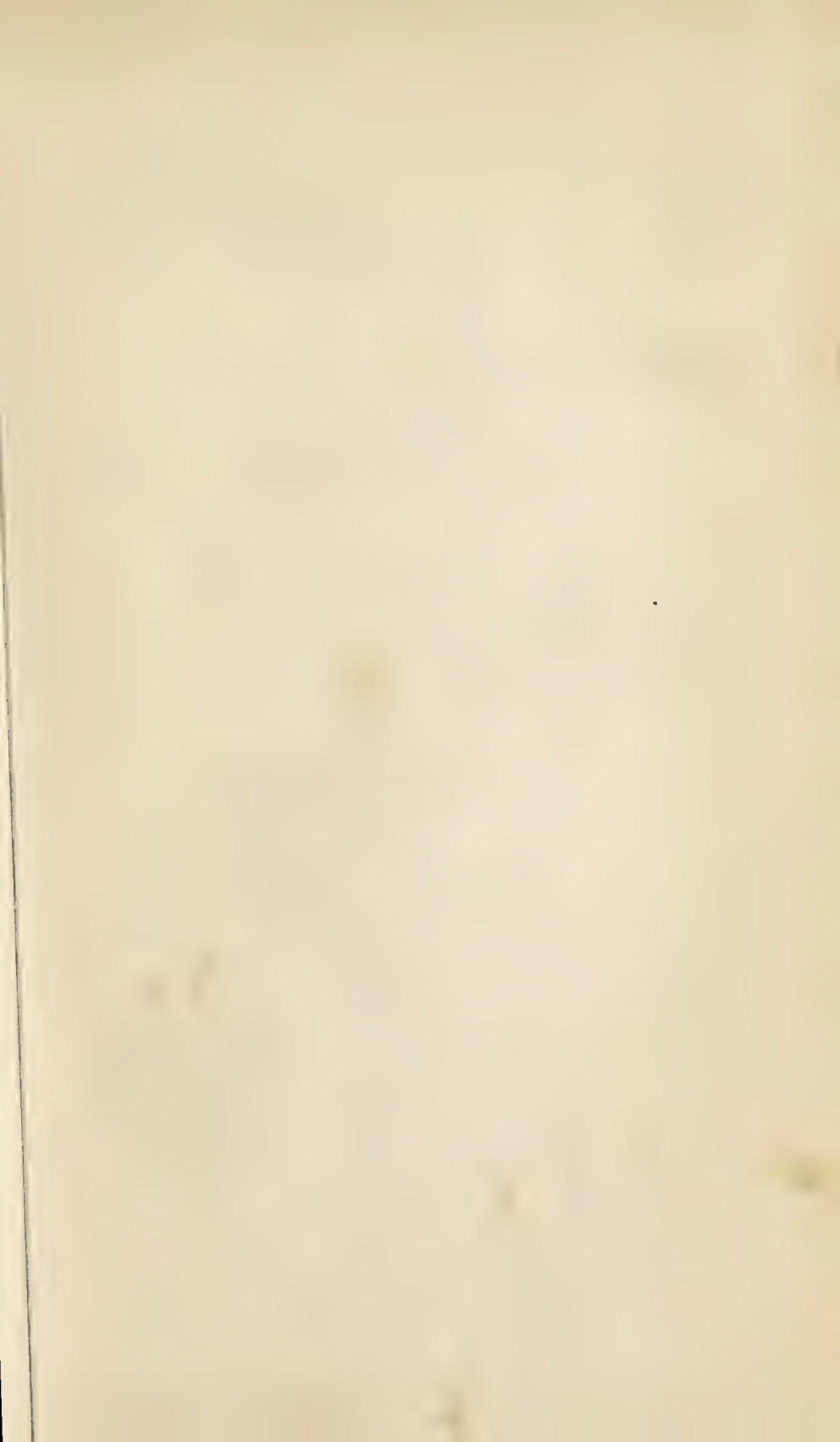
Lasiorrhiza ceterachifolia. Cass. *Dict.* 43, p. 80. Less. in *Linnaea*, 1830, p. 11.

Lasiorrhiza viscosa. Cass. *Dict.* 43, p. 80?

HAB. Falkland Islands. Née, Gaudichaud, Mr. Wright.

A very handsome showy species with large and highly fragrant flowers, which some authors, as Pernetty, compare to the odour of Benzoin, and others (Gaudichaud) to that of Vanilla.

Fig. 1. Involucre cut through to show the receptacle. *f. 2, 3.* Florets. *f. 4.* Stamens. *f. 5.* Hair of the pappus :—magnified.





TAB. CDXCVII.

RANUNCULUS BITERNATUS. *Sm.*

Caule repente, foliis longe petiolatis circumscriptione cordatis 3-partitis partitionibus petiolulatis iterum sæpe tripartitis lobis cuneatis 3-fidis, petalis 6-8 oblongis (flavis), carpellis plurimis ovatis compressis stylo recurvato mucronatis in globum digestis.

Ranunculus biternatus. Sm. in Rees, Cycl. n. 48. De Cand. Prodr. v. 1, p. 30. Deless. Ic. Sel. t. 24.

HAB. Straits of Magellan. *Commerson*; Falkland Islands, *Mr. Wright*.

This species does not appear to have been discovered in the Falkland Islands till Mr. Wright detected it there. I should not have figured it, had I ascertained, before the engraving was prepared, that it was the same with the *R. biternatus* already so well represented by Delessert in his valuable *Icones*. I was misled by De Candolle's placing this plant in his division of the genus "*floribus albis*," whereas the inflorescence is decidedly yellow, as indeed Sir James Smith had suspected, whose description is moreover very accurate.

Fig. 1. Flower. f. 2. Head of carpels. f. 3. Single carpel:—magnified.



TAB. CDXCVIII.

ARABIS MACLOVIANA.

Glaberrima inferne ramosa, ramis erectis teretibus, foliis subglaucis inferne dentato-serratis radicalibus ovato-oblongis longe petiolatis caulinis sensim minoribus brevi-petiolatis supremis lineari-oblongis sessilibus, corymbis compactis, calycibus patenti-hirsutis pedicellos superantibus, petalis spathulatis albis, siliquis erectis strictis uncialibus sublato-linearibus stylo breviter terminatis, valvarum nervibus 3 crassis et reticulatim venosis.

Brassica Macloviana. Gaudich. in Freyc. Voy. 1, p. 137.

HAB. Falkland Islands. *Gaudichaud, Mr. Wright.*

M. Gaudichaud's description of *Brassica Macloviana* so entirely accords with this plant, that I have no hesitation in pronouncing the two to be the same; but I do not see that the species can be referred to *Brassica*. It possesses quite the habit and I think the character of *Arabis*. The valves of the siliqua have three peculiarly strong prominent nerves, and the lateral ones, being perhaps the most prominent, give a somewhat 4-angled or 4-sided character to the fruit.

Fig. 1, 2. Flowers. f. 3. Stamens and Pistil. f. 4. Petal. f. 5. Fruit. f. 6. Portion of a valve of the siliqua. f. 7. Seed. f. 8. The same laid open. f. 9, 10. Embryos:—magnified.



TAB. CDXCIX.

VIOLA MACULATA. Cav.

Stigmate apice subplano, rostro brevissimo, caule abbreviato, foliis ovatis subtus sæpe minute fusco-punctatis longe petiolatis serratis puberulis, stipulis ovatis fimbriato-ciliatis, calcare brevi obtuso, petalis barbatis.

Viola maculata. Cav. *Ic. v. 6, t. 539. De Cand. Prodr. 1, p. 297. Hook. and Arn. in Bot. Misc. v. 3, p. 144, and in Bot. of Beech. Voy. p. 10.*

V. pyrolæfolia. Poir. *Dict. 8, p. 836. Gaudich. in Ann. des Sc. Nat. 5, p. 104. (excl. Syn. V. Magellanicæ, Forst.)*

V. lutea, foliis non acutis. Feuill. *Chil. 3, p. 66, t. 48.*

HAB. Falkland Islands. Née, Gaudichaud, Mr. Wright; Straits of Magellan to Conception in Chili. Messrs. Lay and Collie, Cuming, &c.

This inhabits the sands and sea-shores of the Falkland Islands, and, probably, similar localities in the Straits of Magellan and in Chili. The name is very inappropriate; the minute dots on the underside of the leaves which gave origin to it being almost microscopic, and not always present. The flowers are yellow, and no doubt can exist of the plant being the "*Viola lutea, foliis non acutis*," (for the leaves are frequently obtuse,) of Feuill. *Chil.*

Fig. 1. Stamens and pistil. *f. 2.* Single anther. *f. 3.* Pistil. *f. 4.* Petal :—*magnified.*



TAB. D.

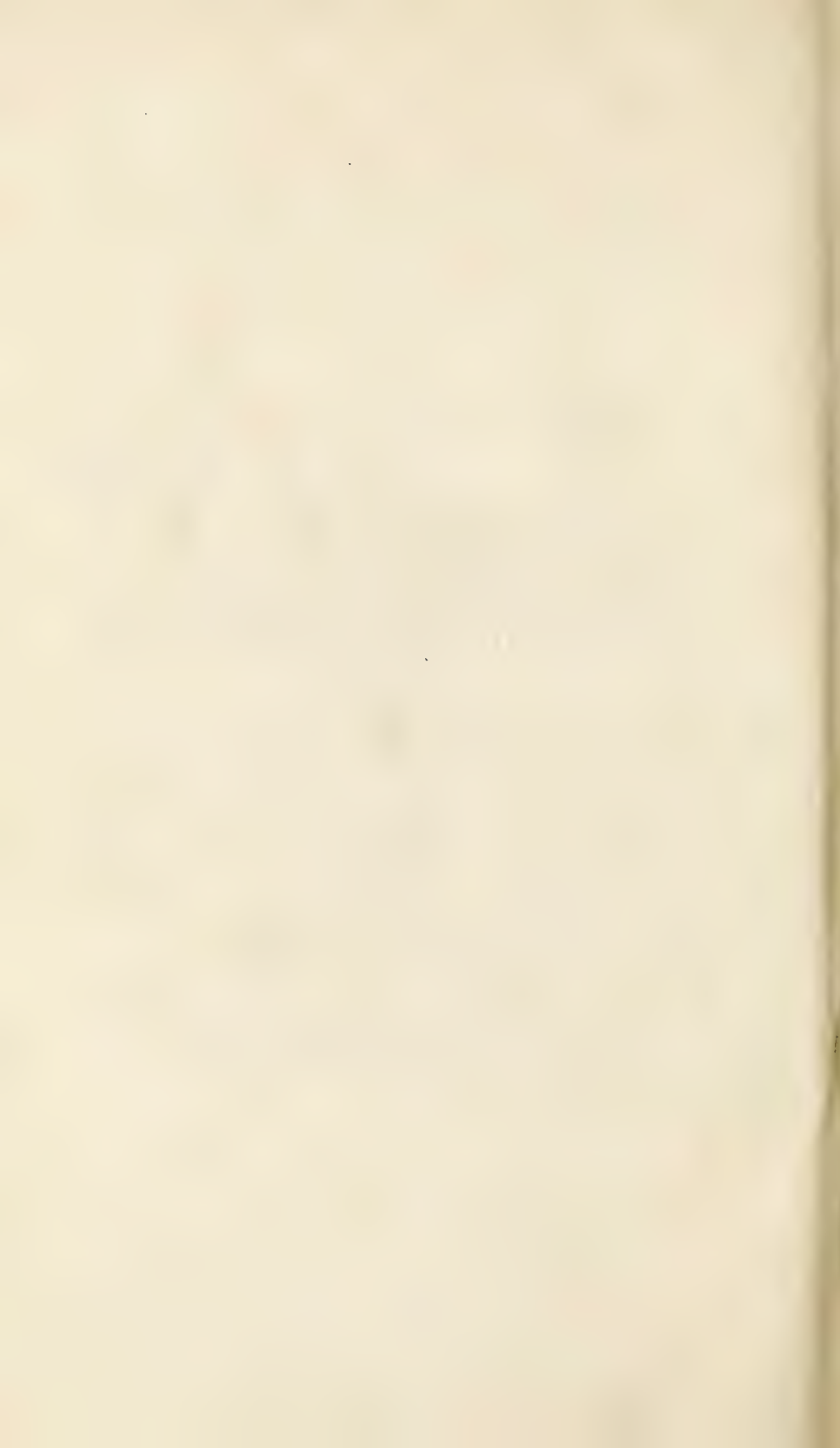
ARACHIS MARGINATA. *Gardn.*

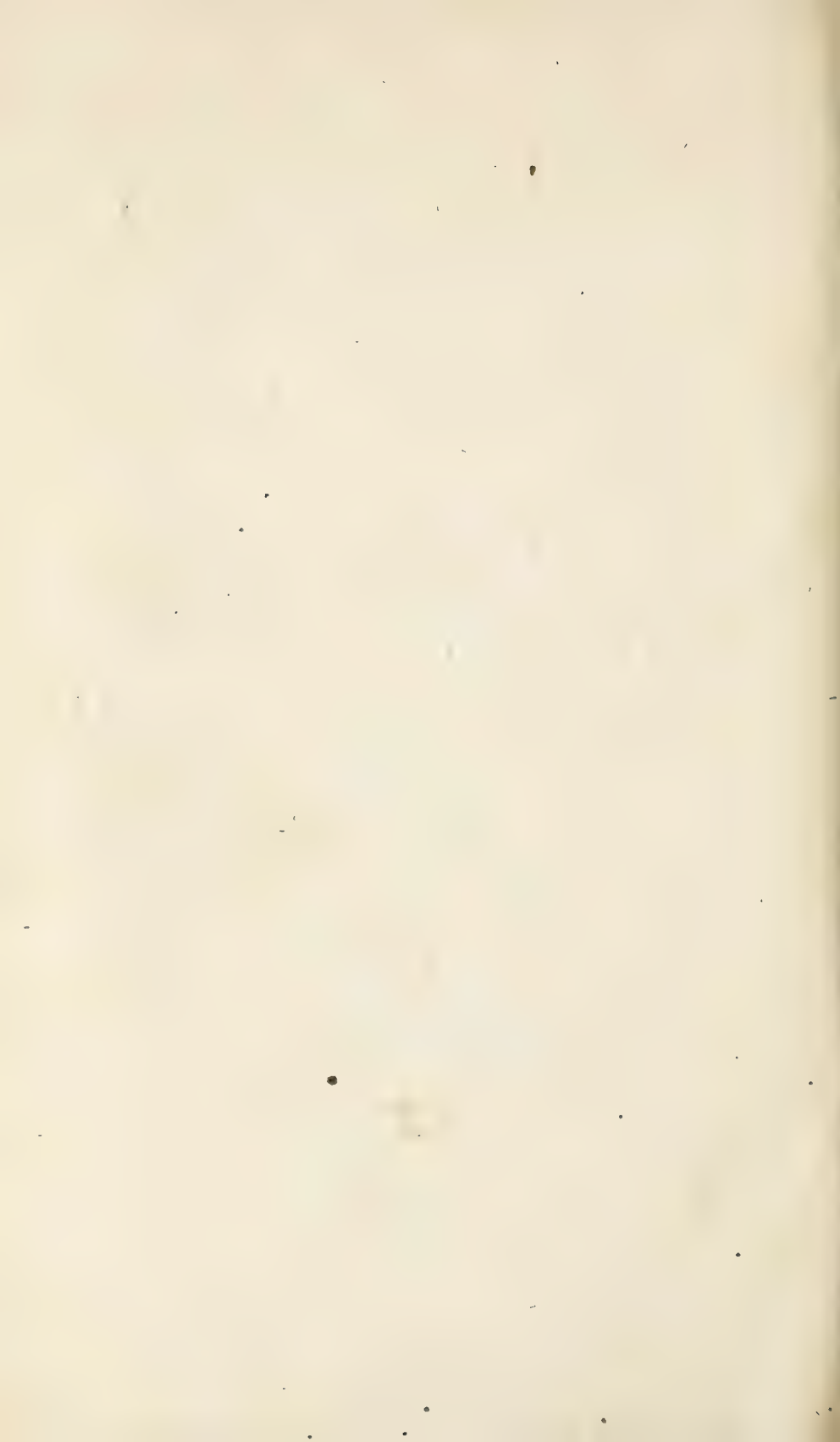
Perennis, caule brevi subsimplici sericeo-villoso, stipulis foliorum par infimum superantibus, foliolis coriaceis obovatis oblongisve emarginatis supra glaberrimis subtus sericeo-villosis margine valde incrassatis longe ciliatis.

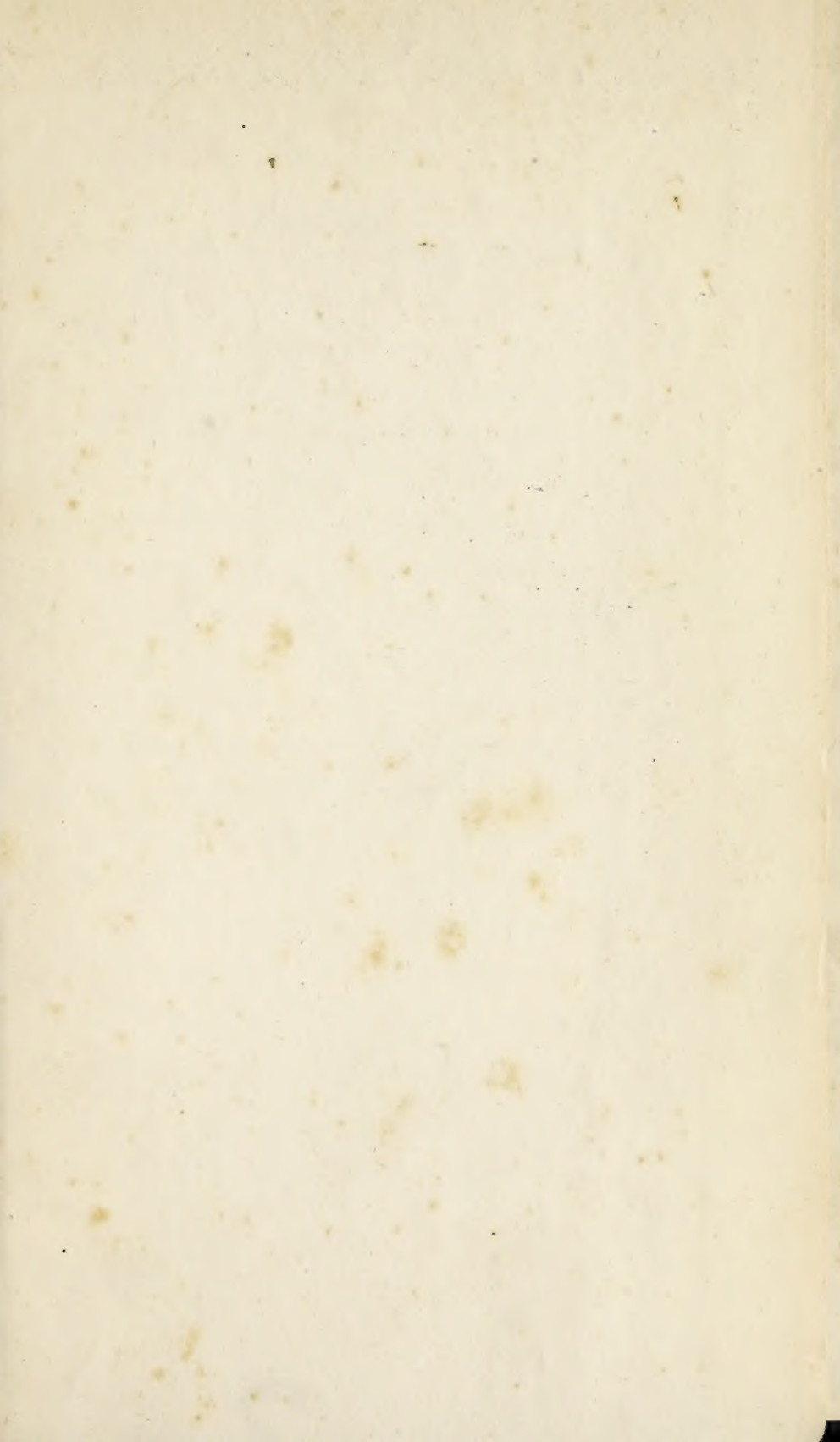
Arachis marginata, *Gardn. Herb. Bras. n.* 3103.

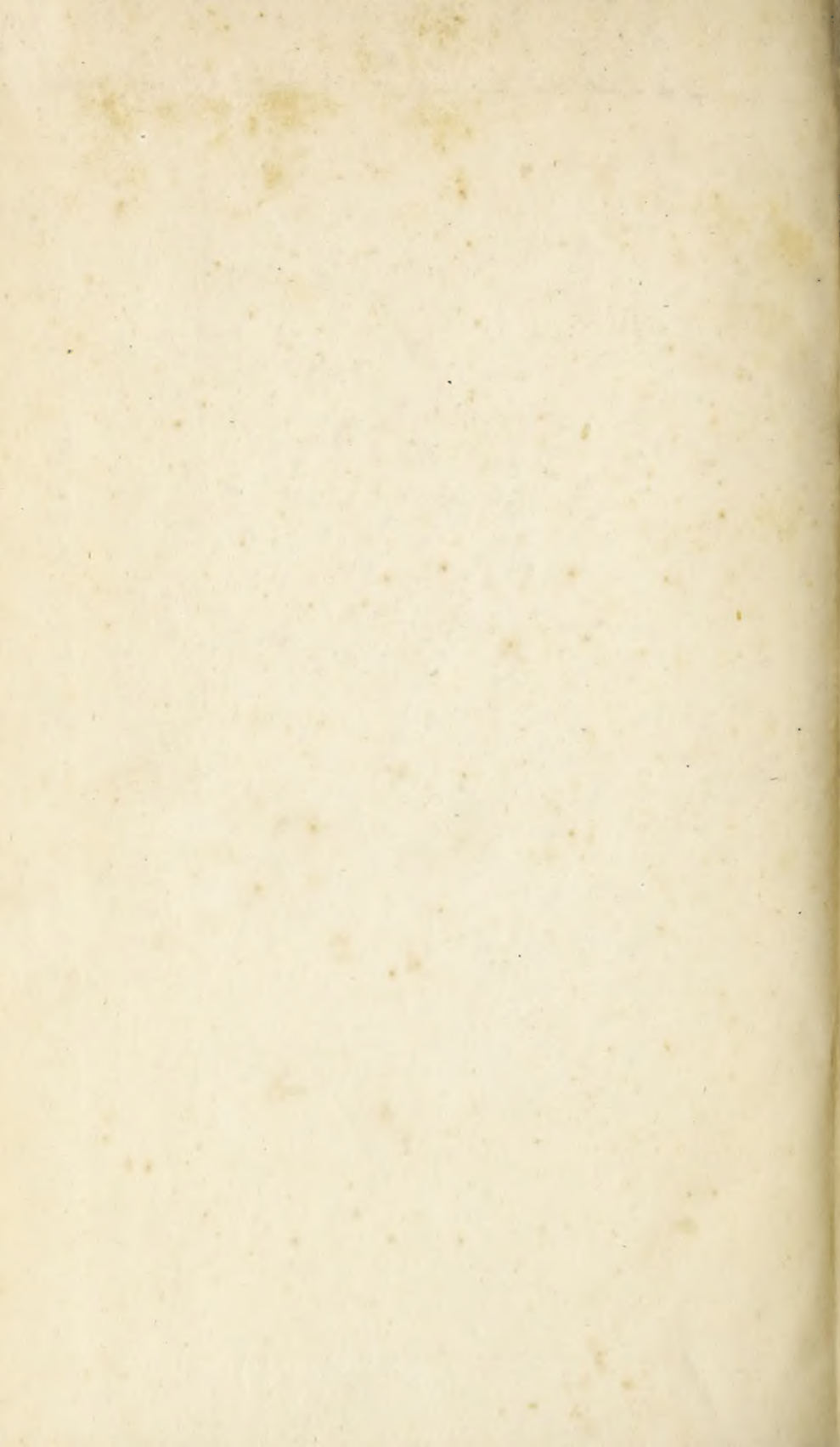
HAB. Rare in upland sandy Campos near the mission of Duro, province of Goyaz, Brazil.

The specimen from which the figure has been taken is perhaps only the young state of a much larger plant, as all the other species of the genus have long, procumbent, lateral branches. It differs from *A. villosa*, Benth., by the leaves being smooth above; from *A. tuberosa*, Bong., by the long silky hairs which cover the whole plant, except the upper surfaces of the leaflets, and the much less reticulated foliage; and from both by this latter being more coriaceous and having a much thicker margin. My *n.* 2091, from Piauhý, is a broad-leaved form of *Arachis pusilla*, Benth. in Trans. Linn. Society, 18, p. 159.—*G. Gardner.*











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